THE
SCHOOL JOURNAL
ORGAN OF THE DEPARTMENT OF PUBLIC INSTRUCTION AND OF THE STATE TEACHERS' ASSOCIATION.

Vol. 50. SEPTEMBER, 1901. No. 3.

ROUND TABLE CONFERENCES AT STATE ASSOCIATION.

SOME REPORT OF WHAT WAS DONE IN THE SECTIONS.

THE Conference on Drawing was held in the lecture room on the second floor of the Girls' Normal School, on Wednesday afternoon. In opening the meeting the Chairman, Dr. Edgar A. Singer, Assistant Superintendent of the Philadelphia Public Schools, said :

In January last, the Executive Committee of the State Educational Association requested me to conduct a Conference on Drawing at the annual session, in Philadelphia, July 2–4. During the last twenty-five years there have been varied opinions respecting the value of drawing and art education in the public school curriculum. Thoughtful educators have given the matter careful study ; and while some are still in doubt, others have passed beyond the stage of mere speculation, and still others have submitted the subject to the practical tests of the school room with results so satisfactory as to prove its right to a place in the course of study for elementary as well as for high and manual schools.

In order that the matter may be considered from various standpoints of opinion and experience, I have requested papers and discussions on the two main divisions of the subject :

1. The educational value of drawing —as a means of expression, in correlation with other studies, in æsthetic culture, as a fine art.

2. The relations of drawing to industrial pursuits—in home decorations, in dressmaking and millinery (involving colors), in constructive work, in the mechanic arts.

In January I sent out circular-letters to superintendents of twenty of the largest cities in the state requesting contributions to an exhibit in connection with the conference. From some superintendents no response came ; from others, words of encouragement to collect and arrange such a display ; while from others, prompt acceptance of the invitation and cordial promises to prepare exhibits of the character requested.

As a result, the conference has, in the corridors of this building, valuable and extensive exhibits illustrating the first general division of the subject to be discussed—the educational value of drawing. These drawings are intended and are arranged to show the several phases of each year's work throughout the course of drawing in the elementary schools in each of the cities contributing to the display. Harrisburg has sent forty-eight mounts, each 22 by 28 inches ; West Chester, eighty mounts ; Pittsburgh, one hundred and twenty-five ; Reading, one

hundred and seventy-five, and Philadelphia, three hundred and fifty. Scranton has sent three large portfolios of graduated work from the first year to the eighth inclusive; and Bristol has sent us specimens of work in all of the elementary grades. There are, in addition, in the rooms of the School of Observation and Practice, class exercises of pupils in the several grades; and in the High School for girls, illustrative work for each year of the course in drawing.

In illustration of the second general division of the subject—its relations to industrial and commercial pursuits—exhibits have been prepared and arranged in their proper and legitimate environments, in the several Manual Training School buildings. These exhibits show the general lines of work in drawing and their applications in decoration and in wood and metal work for each year throughout the courses prescribed for these schools. In the Elementary Manual Training School, drawing is taught in connection with Sloyd work during the last three years of its present course, corresponding to Grades III, IV and V of the elementary schools. In the two Manual Training High Schools, there are about 850 boys who pursue the study in its various phases throughout the three years' course, with special reference to decoration and to constructive work in wood and metals.

In further illustration of the applications of the principles of drawing and of the harmony of colors included in the course in drawing, there is an interesting and instructive sewing exhibit displayed on framework eight feet high and extending about 175 feet lineally. This subject is taught in the Elementary Schools of Philadelphia by 56 teachers to about 40,000 girls, in grades from the third to the eighth inclusive. The manual feature of the subject is also emphasized by the display of drawings in connection with cookery, a subject taught in thirteen "kitchens" by thirteen teachers to 3,500 girls in the seventh grade or year of the elementary schools.

There is, besides, a carefully arranged display of Kindergarten material illustrative of the sequence of the course of instruction in the several features governed by the philosophy of method in this department of child education. This display is supplemented by an exhibit of one hundred mounts showing work done by children in the public kindergartens connected with the public school system of this city. There are, in all, 142 Kindergarten teachers in charge of 7,500 children who are admitted at the age of four years, and, at the age of six years are transferred to the Primary Schools.

Finally, to connect the subject with its higher forms of expression and with the higher emotions of pupils and students, there is a large collection of carbon prints for schoolroom decoration to illustrate the subject as a fine art. Special arrangements have been made for the reception of visitors who desire to see the exhibition of famous paintings and sculpture in the Academy of Fine Arts.

The following paper was then read by Dr. William A. Mason, Director of Drawing in the schools of Philadelphia, on the

EDUCATIONAL VALUE OF DRAWING.

The curriculum: What a pregnant word! So reminiscent of past growth and suggestive of future development. A whole educational history is suggested by its name, a history of progress and improvement. So rapid does the evolution progress that the conservative or machine teacher—of the past—seems hardly to have adjusted herself to her newly devised, monthly programme before some new branch has budded out on the educational tree, and all her coördinations have been correspondingly upset by the innovation. Yet the modifications that the school curriculum has undergone during the past quarter of a century seem to have been in response to an enlightened popular opinion among educated people that has demanded and secured them.

Out of the narrow pedantry of the past, which considered education to be the acquisition of information, of certain specific facts concerning a few subjects loudly proclaimed to be practical, but whose insisted importance often seemed to be inversely as their usefulness in actual life, has grown the modern belief that education is valuable only as it develops the mind in an all-round way and induces correct habits of thought on all subjects. Education to be of any real, vital value should aim to cultivate self-directing and self-determining mental thought, and a capacity to think originally.

The function of all study is to prepare for real life—for complete living. Not for any abnormal or one-sided existence; not living by bread alone, nor unto one's self alone; but knowing life in all its fullness of moral, intellectual and physical sanity. While there may be some topics in the course of study in the elementary schools which could stand abridging, the curriculum is necessarily complex, for life functions are complex, not simple. The enrichment of the course, which has taken place of late years, has been along lines which broaden the comprehension of the pupil, where before he was tied down to the memorizing of specific facts.

The gain has been in the direction of self-activity, both in thought and in the expression of thought. This advance has followed the intro-

duction of the objective method of study; in which the concrete object, wherever possible, has been substituted for the text-book description of it, too often memorized to the sacrifice of the fundamental processes of perception and the coördinate mental activities which follow scientifically-directed object-study. In study based upon the observation of actual things, as the habits of animals, the growth of plants, the phases and phenomena of the seasons, etc., the pupils investigate for themselves and make their own mental deductions.

Another gain, and this has been notable, has been in the increased power of individual expression in language; for the pupil being thrown upon his own resources, is compelled to use his own language to express his conceptions of the relation of things as he perceives them. Thus by the method of objective study, mental initiative and habits of creative thought are developed; while the faculty of expression is strengthened whereby these thoughts are fittingly communicated in appropriate language.

I believe no other subject in the curriculum is better calculated to strengthen the perceptive faculties, or to induce habits of self-dependence of thought than Drawing. Indeed, it may not be too much to claim for drawing, that it has been largely instrumental in bringing about the present status of the objective method of study; as it is object study *par excellence;* the Simon Pure article. In drawing an object—a plant, for example—close, critical observation of every part is required. The details must be carefully noted and understood, in order that they may be properly drawn in their true relationship. The mind and eye are peculiarly trained in the exercise of object drawing, as the process is both inclusive and exclusive. At first the details of any object must be observed and recognized in their proper relationship; then, in order to make the representation artistic and not literal, much has to be excluded from the picture, leaving only essentials.

This makes drawing a highly specialized subject for the training of observation and judgment.

The change in method that has taken place in the study of drawing is but a counterpart of the same movement that has affected other studies in the curriculum. Formerly reading and writing were taught by the analytical method, by first mastering the articulate letters of each word before the word as a whole was recognized as a concrete entity. This apparently seemed a logical method; but being analytical and abstract instead of concrete, it depended upon functions of the brain that do not develop early.

To-day the concrete word is the smallest unit recognized by the pupil both in reading and in writing. The analysis into letters is a succeeding operation. In the same way grammatical analysis of the clause or sentence, formerly taught before composition was taken up, is now deferred until the higher grades are reached. Verbal expression by writing is now made a spontaneous exercise for the expression of the thought of the child; not pedantic, nor academic, as formerly, to illustrate the conventional rules of grammatical construction.

Drawing is graphic language; and is a method of expression older even than writing itself; for its symbols are the very pictures of things, as were the primitive pictographs from which all writing has descended. Its acquisition as an art gives increased power and range in the ability to express thought. Once the fundamental principles are fairly understood, there is hardly any limit to the extent to which it may be employed to elucidate thought.

Drawing, like reading and writing, was formerly taught analytically. Tedious drills upon abstract lines—the articulate parts of figures—long preceded actual picture drawing, and were in no way immediately related to the function of expression. The work was analytical instead of synthetical, and the exercises were largely studies of the geometric details of forms and figures, rarely the pictures of concrete things themselves. In this method it paralleled the instruction in language, in which mechanical drills upon words dissociated from other words in a complete sentence preceded actual, original written speech; yet this was thought to be a necessary introduction to it.

To-day, however, the instruction in both branches is more rational. Preliminary mechanical drills, analytic in their nature, have been found to be destructive of spontaneity of thought-expression. Such exercises should come later, not early in the work; for the young mind easily tires of analysis and desires to express the whole concept, even though the form of expression be at first somewhat crude and untrue. Neither in language nor in drawing should drill upon abstract forms outrun the mental function of expression; for this expression must necessarily be with concrete images, not with skeletons.

At every stage the hand should be taught to express ideas in the mind fluently and spontaneously, without waiting for elaborate finish in the execution.

The more natural method would seem to be to have the child draw freely from concrete objects and from the imagination.

The choice of objects and the medium of expression are most important. Children are not interested in flat, unmeaning things; they prefer to draw from natural objects. Nature acts like a charm in securing and maintaining their interest; and this is an important element. Indeed, it ofttimes seems as though their delight in their work were inversely as the success of the representation. Another important element that enters into the success of the work is the drawing medium. Formerly all exercises in drawing were executed with the hard pencil. They were made with sharp, mechanical lines; the aim being to secure accuracy at all cost. But it was the kind of accuracy that gave the skeleton without the tenant—the form without the spirit; and the cost turned out to be the expense of the child himself. His hand was trained in skillful manipulation only to be misapplied; while the inward appreciation of the true and the beautiful was entirely undeveloped.

The more suggestive the medium is of the color quality of the object to be represented, the closer is the translation and the less conventional is the picture. The object, whatever it is, exists in color to the eye, not in outline. To be sure, it has a contour; but it is only the visible boundary of the color. The contour of objects appeals to the sense of feeling; but the color

appeals to the feeling of the senses. Children delight in color and in its representation; and invariably approach nearer the truth with its use than with the black pencil treatment.

This is the age of color in the subject of drawing. Outline drawing, while it may be disciplinary, is unreal. It is conventional. Its days are numbered, until we can find a good practical substitute for it. Colored chalks, colored crayons and water colors, are now the magic wands in the hands of the pupils that are fast dispelling the shadowy phantoms that have heretofore paraded as the representation of things. The color medium offers the possibility to the pupil of making the drawing resemble the original without translation of tone; while the black pencil requires the conventional translation of every color into gray or black. Experience is proving that even with the technical difficulties of water color, the average color drawing is decidedly better than pencil work. Nevertheless, pencil drawing and shading should never become a lost art. Indeed, the pencil must ever remain the handiest tool within the workman's reach.

We should recognize also the strong æsthetic value of the color treatment. The child's innate love of beauty is appealed to by it, and he is brought into closer touch with nature and with art. With color, landscape drawing is made possible even from the first year, when the essential elements of landscape representation may be taught. This work may be largely imaginative, as indeed it necessarily must be with in-town pupils.

Throughout the entire course in pictorial drawing objective and subjective representation should be practiced side by side. Frequent exercises should be given in imaginative drawing. Proper distinction should be made between memory and imaginative drawing. The former has small value beside imaginative drawing. The memory is sufficiently cultivated by every other subject in the curriculum. It is the office of drawing to develop that rare quality of the mind, creativeness. If our work do not do this in every direction of the subject, it has been well-nigh futile. In regard to prescriptive rules in pictorial drawing, the fewer given in the elementary grades the better. Perspective rules and theories are entirely unnecessary and need not be taught.

Pictorial drawing, however fascinating it may be to the pupil, should not be the sole aim of the course in drawing; although it is concededly the all-important subject, and the one of most general value. It must be remembered, however, that among the youth we are educating in this generation are all the designers, artificers and mechanical constructors of the coming generation, who are to fill our draughting rooms and designers' offices, our workshops and industrial plants. In any community the number of artists who paint pictures bears but a trifling proportion to those who apply art to manufactures. So too while the pictures that we particularly like the best among those that a pocket-book, poorer than our taste, permits us to hang upon our walls are few and far between, the number of manufactured objects in our homes that are decorated with considerable pretense of art are numbered by the score.

This great field of man's industrial handiwork offers the most fruitful opportunity for the application of pictorial art. Here, by hand and by machinery, the beauties of the fields ard gardens, the geometry of bud and cell, and the treasures of historic ornament are transcribed to textile, fictile and other fabrics by the trained hands of designers. Into this life a considerable portion of our youthful charges must enter; and the larger the number that are trained for these positions the more credit to our school systems and renown to our cities.

Two elements enter into the products of these industries: geometry and design—or structural and æsthetic elements. No true applied art can exist without both of these elements, and no course in drawing can be complete that does not include all three subjects now enumerated; namely, pictorial drawing, decorative drawing and geometric drawing. Geometry must be the basis of all structural work as well as of the ornament which decorates the construction. It is idle to conceive of decoration as existing without a geometric basis, or without conformity to the lines of construction. Geometry then must be taught in its application to constructive drawing and constructive design. Pupils should not only be able to read and interpret working drawings of objects, but they should be able themselves to make the drawings of simple constructions, including views and sections, before the High School is reached. Such drawings make extremely valuable exercises; as they present objects in their real facts of form. It supplements pictorial drawing, which represents objects as they appear to the eye as an impression. Being an analytical exercise it should succeed pictorial drawing.

I believe it may be begun with profit towards the latter part of the fourth year in school, not earlier. The work should be done with precision, by the use of ruler and compass. The exercises should at first be of the simplest possible nature; of objects free of all complexity. In the fifth or sixth years, objects may be taken in which the front and side views and necessarily the top and bottom views, are different. In the remaining years, simple constructions like spools, tools, simple mechanical contrivances, simple constructions in wood, etc., requiring sections, should be taught. It is not at all necessary that many exercises be given, nor that they be complex.

The principles are the same for everything, from the working drawings of a lead pencil to those of a locomotive. The question may be, and it often has been, asked: Why, if comparatively only a few exercises are to be given, begin the work so early; why not wait until the last year or two and condense it all into one solid term of construction drawing?

I answer: Because it is a species of truthful representation which should be presented along with exercises in visual object-drawing as early as practicable. The two exercises stand in supplementary relation to each other; and should be coördinated as soon as the pupils are old enough to derive practical benefit from geometric drawing. Besides, there are many technical details that cannot be mastered all in one year, as measuring, ruling, striking circles, planning the spaces on the sheet, etc. All of

which exercises are valuable in training the judgment through the years that I have planned for this work.

The other important factor that enters into the product of our industries, and the dominating one—for indeed we speak of them as art industries—is the æsthetic element. It is hardly necessary at this time to comment upon the commercial value of art in our manufactures. Everybody concedes it. The manufacturer, if he does not realize and appreciate beforehand, learns from his dealings with the retailers of the unsalability of an inartistic object.

The public generally is beginning to appreciate good art and to taboo inartistic furnishings. For after all, this is the final criterion, and this is the object in view: the public taste, and its improvement. The æsthetic element in life is an extremely important one; and very much of our happiness is dependent upon it, as anyone will conclude if he reflect but a moment. Consider how often one's sense of taste is called into requisition in the selection of furnishings and other objects; and how much of enjoyment would be left out of life if this faculty were not exercised and developed.

It should be a distinct function of the course in drawing to cultivate the refinements of taste. Nature-drawing, especially in color, fulfils a part of this function; for nature is the fountain source of art inspiration. But decorative art should be more than mere imitation, more than color-photography. It must be art in the truest sense; in the sense of artifice: that is, art applied to construction with reference to the constructive nature and the limitations of the thing to be decorated. Two elements must be considered in decorative design; namely, form and color. In neither case should nature be followed literally. The decorative unit of a natural plant, for example, should be much simpler in form than its prototype; and should receive a treatment technically known as conventional. This treatment can easily be carried too far, and the unit be made geometric and lifeless. A middle ground should be taken that avoids the riotous complexity of nature: the lobing, notching, veining, and all the multitude of detail and the flat, dried, inert forms of the old school geometric conventionalization.

Historic ornament should be studied and copied by pupils both for the excellent training which it affords in line drawing and for the lesson which its examples teach of the desirability of simplicity of decorative treatment. There is a current tendency to taboo historic ornament and to concentrate effort upon drawing from nature.

But, valuable as nature-drawing is, it does not entirely answer the demands of industrial design. Some degree of adaptation and of creative effort in the line of originality in design is absolutely demanded. We must begin this exercise in the elementary schools when the pupils are young; else the faculty of originality becomes undeveloped. Nature supplies the pupil with the decorative material, historic ornament acquaints him with the methods followed by others before his time, and his own creative instincts must be depended upon to do the rest. Thus will the pupil be taught to have command of nature and art, in the service of man's handi-work.

In the matter of color, the canons of decorative art are not yet more exacting than with form. Whereas, nature combines colors apparently with the utmost abandon, our own innate sense of taste in color combinations requires us to follow a definite scheme in the use of color. Whether it be in furnishings, wall, or floor coverings, or in dress, a scientific color scheme has been quite universally adopted.

The theory generally accepted is one based on the scientific and physiological study of color and of color sensations of sight. Outside of the contemplation of the works of nature, the eye is not pleased with indiscriminate color combinations, but demands by its physical structure certain harmonies and contrasts. The red-yellow-and-blue theory, possibly slightly modified in statement, is the commonly accepted basis of color applied to design. Pupils should first be taught how to combine colors of self-tones to produce pleasing harmonies of analogous hues, and then to know what colors to use to produce pleasing harmonies of contrasting hues. These exercises should not necessarily be limited to design alone, but should be applied in matters of dress, house-furnishings, etc. Colored papers are helpful in this study; and their use is strongly advised. Their colors are the nearest and best approach to the standard colors and their easy availability recommends them for color experiments. In advanced work, water colors should be used in design.

I have outlined, I fear with some discursiveness, what I consider to be a practical course on Drawing. It is a course that should combine in proper proportion exercises in freehand and mechanical drawing, in pictorial representation in both the objective and imaginative treatment, and in the pictorial and decorative treatment of natural forms. It is a course that not only aims to develop the perceptive faculties, but to cultivate the imaginative and creative faculties as well. It may be called an ideal course; but it is capable of realization.

It is probable that few have reached its complete requirements. We have not fully in Philadelphia. It is also possible that some may deny its practicability and inveigh against its requirements as over-professional for young children and beyond the elementary schools, but, I believe, without good reason. At least, I have purposely made the scope of my paper wide enough so that almost any topic on the general subject may be invited in discussion, and be relevant to it.

The discussion was opened by Supt. R. K. Buehrle, of Lancaster, Pa., not by reading a paper but by making the following remarks:

The subject of drawing is one of great educational value, and specialists, supervisors and others—enthusiasts—having their attention fixed on one subject, generally demand more time for it than the interests of other studies in the course will allow. We should always remember the limitations under which the teacher

labors for want of time and expert knowledge and skill. Hence, only what appeals to all should be attempted. The public schools must limit their work to the general, to that which has the greatest educative value. Secondly, regard must be had to the pupil rather than to the product of his skill. Not the thing drawn, not the picture made, not the line, but the effect on the mind and hand of the pupil is the principal thing. The remark should be, not "How beautiful is the drawing!" but "How this child has progressed!" "How much steadier the hand, how much more accurate the sight!" I should expect as a result of good work in drawing, so far as the pupil is concerned, better taste, greater refinement, more orderliness, neatness and care, more thoughtfulness, greater ability to understand picture illustrations in books, illustrative diagrams, and especially ability to draw on paper or blackboard by way of illustrating his thought when reciting his lessons in school in the natural sciences and geometry. Drawing is also the study *par excellence* that introduces the pupil to art.

The following paper was then read, with chart and other illustration, by Miss Emily W. Bennett, instructor in drawing in the Keystone State Normal School at Kutztown, Berks County, Pa.:

BROKEN-LINE PAPER ON DRAWING.

True drawing is suggestive rather than realistic. When it arises to its highest form, it is imaginative and creative. The mind proceeds from the known forms to the ideal. As the fibers form the wood, so the lines form the pictures. Guiding lines, "blacking in" lines, grand structure lines, broken outlines, texture, section curve lines; lines of direction, continuous lines, receding lines, working lines, and a still longer glossary could be recalled if we persistently pursued a bee line, as it were, in recalling them. This paper in its entirety, will represent a broken line; each separated dash or break in the line will be suggestive rather than complete, owing to time limit. A few sheets of illustrations must emphasize my thoughts more than words.

We hope the State Educational Association is a nucleus for mutual inspiration and instruction; we anticipate profit, by the interchange of class-room experiences. During my several years as art teacher I have found it expedient to enforce constantly on pupils' minds the broken line for drawing. Students, high school graduates, I have found, who have never been taught to draw by broken lines. The continuous, even hard, line taught by many instructors, is contrary to true artistic feeling. It arrests the eye, and detracts from the object. In nature we see no lines. Good specimens of drawings only should be placed before students. The bugaboo animals made by the average chalk-talker, are hideous representations of unreal things, and lower the standard of correct drawing; they also teach what must be untaught.

The seven objective points to be taught our pupils are: (1) Size—"too small" is the constant criticism; (2) Structure or guiding lines; (3) Broken-line drawing; (4) Expression, dark and light lines; (5) Foreshortening; (6) Importance of shadows, for relief; and (7) Backgrounds, for values. Start out with correct art principles.

Why should we deceive and flatter our boys and girls with the idea that drawing is easy, when it is not easy to draw proficiently? Would a teacher of mathematics delude his pupils in that way, till they should think that the path of knowledge is a straight flowery highway? Why teach that skill in drawing is a natural gift and not a thing to be worked for? Erase the thought, sponge out the laziness thereof, and sandpaper it down.

Millet had a true feeling for form, not beauty of face. He was a true sculptor at heart, assisting his eye and hand by modeling his peasants in clay first. In the "Sower," observe the simplicity of his grand structure lines and sweeping curves; in "The Gleaners" his rectangular figure that encloses the two women to the left. Every object, however complex and curved, can be reduced to simplicity and drawn by means of straight lines. See the whole and then the parts. Ever have an eye for comparison, then enforce size. A small drawing minifies results, gives no opportunity for work. The cats in the illustration here shown, are drawn by the broken line method and are meant to look like the animal, while the upper cat might be anything on the earth, in the waters below, or heavens above—the *average* chalk-talk bugaboo—a contradiction to the hoary expression, "Good things take time."

Expressive reading, expressive language, and expressive drawing—expression in the three are one and the same—a relief from monotony and a promoter of emphasis. Bring out the dark and light lines. Emphasize the depressions and elevations. Give a pleasing variety and thus reveal form, more by varied outline than by a continuous even line. Then our drawings will express character. The elocutionist can be assisted in his facial expressions by his artistic knowledge of the lines of the human face. The same stolid countenance is not preserved through sentiments of joy and sorrow, fierceness and passivity. The artist's intelligence about pose and expression in the entire body, will awaken the dramatist's professional sense to the importance of bodily attitudes.

The art of drawing with precision is supported on the skeleton basis of foreshortening and perspective. It is the proper framework for a beautiful superstructure, something that is to be known and exercised. It may be hidden in the final effects, but correct foreshortening and perspective must originate and underlie all works of art, as the skeleton builds and supports, the beautiful structure of Gainsborough's Duchess of Devonshire; or the frame supports an ivy-covered, rambling old manse.

Precision and rule are irksome to an artistic temperament, but bold license of line is restricted by rules for receding lines. The instruction that is mechanical and theoretical alone is incomplete, and a reckless stifling of the æsthetic feelings and emotions. The joint teaching of the rules of perspective, with a feeling for true pictorial results, will mould an harmonious knowledge of the true, the beautiful and the good. I have found the foreshortening of an object to be an elementary idea that is slowly grasped, but it can be promoted rapidly, by a few exercises, in chart illustration. To simplify the process a block-method is good for irregular objects. First the foreshortening of the block is taught by lessons in elementary perspective, together with repeated drawings from the blocks; then an irregular object similar in size is placed on the block. An appreciation of the first naturally leads to the second. Principles involved in the shadows and reflections are also instructive. [Illustrated by pictures and charts.]

But the highest truths of art are not to be put into words, they are only to be felt. The delicacy and grace, the soul and spirit-quality of certain lines and combinations of color are visible only to a trained eye, and are to be distinguished from those of ordinary, commonplace correct maps, only by a cultivated taste.

Poetic expression exists in picture as well as in poem. Prose: "I'm blue. I wish I were dead in that hole." Poetry: After the heart sentiments of James W. Riley:

"And I wish in my sorrow I could strip to the soul,
And dive off in my grave, like the old swimmin'-hole."

That "art is long" is not an enigma. The reduction of our normal school time, for a moderate proficiency in drawing, is to be regretted, because it sets an impossible task before art instructors,

"Sable night, mother of Dread and Fear,
Upon the world dim darkness doth display,
And in her vaulty prison stows the day."

The verse is suggestive of light and shade—and shade beckons to shadow, and shadow lurks behind crouching near by the object, and by its very blackness causes the light and the object to come forward in relief, just as the effect of a pure character is enhanced by contrast with a spirit of evil and darkness. Shadows are long in the morning and evening, and at noon short; they are well-defined or blurred; they are dark or they are faint; but always they are subject to the rules of perspective; they are twin sisters to reflection. But the shadow in its importance is never seen by the beginner, till pointed out by the instructor. We must explain that they push the important personages to the front, and very modestly take a back seat themselves, crouching in the misty haze of backgrounds.

I have thrust upon your notice size, structure and guiding lines, broken line method, expression, foreshortening, shadows and backgrounds—why? Because they underlie and overhang the entire subject, and must be understood, before drawing can be used in correlation with other studies, as suggested in our topics for discussion. Art for art's sake is its proper relation in our schools, distinct, by native right, from other branches. Still it is practical and can be an able assistant. The honey-bee chart here shown [referring to chart], suggests a nature-study lesson, or a composition lesson. The bare outline only is suggested, and is meant to be more fully elaborated, but my paper is suggestive, not exhaustive. The relative sizes, queen, working bees and drones are drawn together with their home; the general description, sting, body, legs and their suitability for work. Habits, gathering of substances, construction of hive, swarming and so on, should be considered. Also some lessons taught by the bee. They are industrious, loyal, fond of our homes; models of cleanliness, sympathetic, early risers and peaceful, though they can hit hard on occasion.

The reason many teachers fail to illustrate the branches taught, is because no thought or preparation is given to the drawing previous to class. The impulse strikes them in the class-room, and they expect to draw by inspiration, on the order of prophecy. But it is not done that way. Practice before the class comes for instruction, and the process will be expediated amazingly. The drawing fixes the lesson, incites inspection, and general observation. The illustration here shown is a suggestive botany lesson, representing the parts of a flower, the shapes of leaves. Another drawing is the enlarged parts of an orange blossom giving the stigma, ovary and calyx; the narcissus shows the bract, the grape the tendril. The grapes are first "blacked in" to simplify the drawing, and estimate size.

Simplified borders and rosettes formed with paper tablets, are good beginnings in design for school work; also conventionalized flowers in brush drawings. The cherry and the clover are used for units in two of these borders. Notice the great dissimilarity of subjects with the identical form, that of a sphere—the dome of St. Peters and a mushroom; the curve of a dog's back, a man's bald head, and an apple. If you can form one you fashion the others readily; if you can draw one form, you surely can the others. The idea is prominent in Dr. McCosh's "Typical Forms in Creation." Notice similarity of forms in these animal and vegetable drawings; the seed ovum, and bug formations. No. 1 here shows the leaf stock of the ash; No. 2, the digit of a species of ape; No. 3, a branch of bamboo; No. 4, a part of the backbone of a reptile—draw one and you can fashion them all.

So with the different branches taught; learn to draw everything and anything. With a little previous preparation, and familiarity with the branch, one can aid himself *ad libitum*. Our text-book illustrations are fine, delicate, and exact. Drawing by pupils fixes the substance in the mind. The knotty points can be simplified by hasty sketches, made by the ready hand of a skilled professor. His language can be elaborated by the form language. The drawing of apparatus is purely mechanical. Colors are catchy and are a step further than the black and white. Pastels are easily managed on charcoal paper. They are to be recommended for the classroom. Here is a water sketch very rapidly done with soft crayons; rubbed in with the fingers representing a waterspout and cataract. So the water sketches, or any other sketches can be made interesting in geography. In this sketch you have the scenery found in the "land

of the midnight sun," where solitude reigns and winter has his home.

Drawing for expression and illustration is educational and practical. The object of good drawing is to train the eye, mind, and hand, to increase the child's power to observe, to think, and to do. American art, and appreciation thereof, can only be improved and cherished by the early training of our students. The capacity for form expression must be more wide-spread, and then its influence will be felt in the industrial world, as well as the social and educational. The lack of requirement of taste prevents business success. The merchant who cannot appreciate artistic environment loses business. The skilled hand without correct taste, to dictate, is akin to machinery. The dressmaker doesn't suit, nor does the milliner. Why? The fault may be in a lack of early æsthetic training.

"Art for art's sake," should be the characteristic line of growth in every person's education. No work is nobler than to establish this connection, between the arts and the minds of the people; and it is this point of contact that the home and the school can establish. Art, joy and true life form a beautiful trio. Can we enjoy a common country ride and feel entertained? Can we select pictures from the living forms around us? This faculty means descriptive eloquence for the author, picture-making for the artist, enjoyment and true life for everybody. The keen selection of character sketches from groups of people, would mean to the detective and the lawyer business and enjoyment. To the minister it means broader professional sympathy and truer life instincts, to be carried into everyday life.

The art feeling is not always objective or pictorial in results. It permeates the inner life and reaches all professions, through feelings and actions. It cannot always be demonstrated any more than can we tell why blue is cold, or red warm, or purple royal. Its influence may be abstract.

As Mr. Liberty Todd, your valuable art instructor, advises, let us study nature and art, at first hand, without artificial means. We should look from nature up to nature's God. Thanking you for the attentive courtesy shown me, I will close this suggestive, broken line paper by two quotations:

Mrs. Alice Freeman Palmer says: "Our boys and girls have a right to a training that will enable them to wrestle with the problems of the future. We want them to be capable of enjoyment. If they love beauty, love their fellowmen, they will be happy, and they will be good, and they will have a source of joy that nothing can take away."

Mr. Ruskin believed in the supreme importance of the life-work. Mere culture was one of his abominations. He says: "A man is not educated because he can read Latin or write English, or behave properly in the drawing-room; but he is educated only if he is happy, busy, beneficent and effective in the world."

Continuing the discussion Miss Mary A. Campbell, of the Philadelphia Normal School for Girls, read as follows on the influence of drawing upon the public taste.

DRAWING IN THE SCHOOLS WILL IMPROVE THE PUBLIC TASTE.

Never is the lack of artistic training in our people so evident as when any attempt is made to beautify our cities; plans for public gardens and public play-grounds either hang fire for years or never materialize. To build a handsome public library, or an art gallery, or lay out a boulevard would be reckless extravagance. To ornament the walls of a public building with anything more artistic than tiles would be an unheard-of reckless expenditure of public money.

Our cities and towns are allowed to grow up without the slightest supervision of this kind, without any well-conceived plan. Nobody is responsible for anything. A house may be ugly, or it may be, in rare cases, beautiful—it is all one. It may be two stories high or it may be twenty; how it may effect the appearance of its neighbors is of no moment whatever; the public is indifferent. Public taste tolerates with equanimity river fronts given over to railroad companies to be made as unsightly as possible, ash barrels on the sidewalks, hideous posts and masses of overhead wires, vacant lots filled with rubbish and fences covered with horrible posters, men smoking cigars, etc., but it is needless for me to continue the list.

Now, I do not mean to claim that a training in art would correct all these evils but I am confident that it would at least ameliorate many of them. It seems a far cry from the beautifying of a city to the teaching of drawing to our children, but let us suppose a case.

Suppose the men and women of the present time—these very men and women that are so indifferent to all things pertaining to art and so hard to influence, the people who "don't know" and don't know that they "don't know" or else "don't care"—they are not necessarily ignorant people in other directions—suppose these people had been taught drawing properly from the art standpoint. Suppose when they began the study, as little children, the subject had been made interesting to them, that they had been allowed to draw things that appealed to their fancy, that their efforts had always been praised or encouraged rather than, as frequently happened, censured or laughed at. Suppose their little efforts were accepted for what they were worth, rather than a standard of excellence set up that could only be reached by the painful effort of the few and never by the many, resulting in discouragement to the children.

Suppose they had been allowed to draw what they thought they saw, rather than what their teachers told them they must see. Suppose that, instead of using the difficult method of conventionalizing objects, they had been permitted to express what they saw as they saw it. Surely no child ever saw a cherry or an apple or a bird or a person as black lines bounding white spaces. Suppose they had been permitted to make their cherries red or their birds blue, or to put yellow dresses on their girls or black trousers on their boys as the case might be.

Suppose that the drawing lesson had been made as important as any other study in the curriculum, that it was no more to be neglected than arithmetic or language; that its importance

was insisted upon by the teacher, that children were not to be trained to think that it was a rather useless branch of education and not to be learned without a special talent. Suppose these same children had from the beginning of their school life been surrounded with examples of what is best in art—pictures, sculpture, famous buildings—and that they were taught to look—not, I would pray most devoutly, from either the standpoint of literature or nature study—but to look at these works of art from the æsthetic standpoint—and that something of the lives of the men or of the times that produced these art treasures was made part of the regular instruction—and finally let us suppose that these same children had been taught drawing from the beginning of their school life by teachers who had been trained especially for the work, rather than by teachers who frankly confess that they know nothing about drawing and care less.

Would it be possible for children with a training such as this to grow into men and women, indifferent to the beauty of their city and satisfied to be surrounded with ugliness?

Even if only material advantages were to be considered, would it take long to convince them that by beautifying a city and making it attractive a direct money return would be the result? Did not the beautiful White City at Chicago bring more visitors than the Exposition itself. Has not the money that has been expended in beautifying many of the cities of Europe been paid many times over by admiring travelers? Why do people go to Rome, to Florence, to Venice, and to Paris? Did not the Elector of Saxony build better even than he knew when he purchased the Sistine Madonna for his art gallery in Dresden. How many times over has the original cost been paid!

Would not men and women with an education such as this recognize the importance of the art training of their children? Would it be difficult to having drawing placed upon its proper footing in the schools?

But unfortunately the real state of the case is something very different from what I have supposed and it is almost impossible to convince the average person that the study of drawing, unless it should happened to be labeled "industrial" or "mechanical" or "design" can lead to any practical result. To combat their ignorance seems as hopeless as burying the pyramids. Of course we know that the pyramids will be buried by sand in the lapse of time—but it seems a long while to want, especially for us.

Therefore we must look squarely in the face of the fact, that it is the children who are at school *now* that we must influence, who will be the men and women of the future; and that it is of utmost importance that the question of art education should receive the serious attention of educators; and that children should be given the sort of training that will make the sense of the beautiful go hand and hand with the useful.

The second division of the subject was then taken up, "The Relation of Drawing to Industrial Pursuits," and a paper written by Professor Albert Paul Willis was read by Professor Lino F. Rondinella, both gentlemen being of the Central Manual Training School, Philadelphia.

THE RELATION OF DRAWING TO INDUSTRIAL PURSUITS.

Ladies and Gentlemen: You have been kind enough to invite me to speak briefly upon the relation of drawing to the industries. To my mind that relation is so peculiar and vital, that any attempt to do more than indicate it, in the time allowed, would be hopeless.

Nor can I, in that time, go into the detail of methods for teaching drawing best adapted to the industries. For such methods must be elastic, or, I may say, liquid ones, able to quickly fit themselves to the environment, the age, and the previous training of the pupil.

I trust, however, that you will allow me, by way of necessary preface, to say a word about drawing in general. To those of us who have watched the school career of this subject, certain big changes have been clearly manifest. Twenty-five years ago and less, it was the companion of music and both were classed as culture studies, fit only for the secluded halls and easy curriculum of the female academy. In fact, Cardinal Newman, in a work on education, expressly cautions the student against drawing as a "mere accomplishment."

But times have changed; those cloister days of drawing are over. From the plaything of the girl pupil, it has advanced to as honored and as honorable a place in the industrial life of the world, as it has always held in the art life. School authorities generally have been a trifle slower than the industrial world to see the value of drawing; but what place it *has* attained in the school curriculum, it has earned.

It is a modern self-made subject; it has no educational pedigree; it does not glitter and bristle with formulæ and equations, it has none of that mystery and abstruseness so dear to many minds. Its name is so frank and unobtrusive that it is no wonder its value has been overlooked.

During the last few years thinkers have been let loose on the school curriculum, and each subject is being submitted to the "test by fire." Of this test drawing has nothing to fear; on the contrary, every trial of its strength, of its value, educational or industrial, of its utility from any point of view, results in a victory for it. All this is evident in the great and growing sums of money, teaching force, and time devoted to it in our school systems. But it is when you come to special institutions, like industrial art schools or manual training schools, that its value is clearly manifested.

So wide is the scope of drawing that, in institutions like the Manual Training Schools of Philadelphia, it requires double the teaching force of any other subject except mathematics or shopwork. Out of a faculty of seventeen, drawing demands two instructors, and while it is only one of thirteen subjects taught, it requires one-fifth of the time spent at the school.

This drawing is nearly all of an industrial character. By that I mean that without sacrificing any educational quality, it aims to teach the boy to express on paper, clearly and completely (which by the way requires clear and

complete thinking), any bit of construction or of design that may be in his mind. In doing this, we try, in all questions involving art and taste, to teach him not only *how* to express, but *what* to express; and so you see drawing bears its full share of the heat and burden of the educational day.

But I fear that you may be charging me with dwelling too long on the school value, and not at all on the industrial value of our subject. There our case is *very* strong. If there be anyone who thinks that drawing is of no practical use to this busy nation, let him speculate upon what would happen if all the draughting rooms and designers' workshops were closed. With no working drawings, tracings, blue prints, designs or models to go by, I venture to say that within twenty-four hours the world's productive machinery would not only be impaired, but would be paralyzed. No building could be erected; no ship built; no piece of machinery nor engineering work constructed; no textile designs woven; no art work created.

The granite blocks that are quarried and exactly shaped in Maine for some far-off structure; the battleships that are designed in Washington and built on the Pacific, are only rendered possible through that universal language, that means of graphic expression which we call drawing.

That language, every true workman must at least learn to read, and every member of society should in some measure learn to use; for in its power of explanation, its power to express the minutest differences of shape, size and location, it is an indispensable adjunct to common speech.

In all *constructive* work its power to tell the exact truth, and its facility in giving complete details render it, of course, vital. But in the very strongholds of academic thought—in history, economics and even literature—drawing, in the form of charts and diagrams, renders valuable assistance.

This subject then, which Cardinal Newman said was only an accomplishment, has, since his day, so proven its usefulness, has touched life at so many points, has so wound its tendrils about the very heart of industry, that in so far as you injure it you destroy the industrial life.

The place to plant the seed is in the schools. The Germans, who are so well qualified to speak, have said "If you want a thing to appear in your national life, place it in your school system."

When I say that the key to the industrial and artistic situation is drawing, I trust that you will interpret the word in its broadest sense, including modeling (which is only drawing in the three dimensions of space) and color (which is only drawing dressed in motley clothes).

The demands which the industries make upon drawing vary greatly. In some it is of little direct value, in others it is indispensable, but in all it has a place. In work requiring plans and detail drawings, it is the *only* way of conveying to the workman the intentions of the designer.

In school life, where a finished product is not aimed at, such drawing offers an exact discipline to the mind; it stimulates the imagination by compelling an accurate and most intimate a cquaintance with the subject to be expressed The boy must get a clean-cut image of the thing, inside and out, through and through. He must be on working terms with the project, or how else could he make detail drawings of it. Surely this training is valuable to a man in any walk of life.

When we leave the constructive industries and approach those in which art is in any way involved, we find to an even greater degree the value and influence of our subject. Its mission, in this case, is a double one; it must be used to convey ideas from one workman to another, but in addition the requisite knowledge of drawing is counted upon to bring with it the still further knowledge of design and of art principles—for drawing is the gateway to these. Such a knowledge, applied to industrial objects, proves the leaven that raises them out of the commonplace and makes of them things of greater beauty and of greater value.

We all know how England, in the sixteenth century, sent her goods to Florence to get those industrial-art finishing touches, and how we in the nineteenth century have sent our raw material to France for the same purpose; and we know too the astonishing wealth which has come to these peoples from this outside work.

This fact is strikingly stated by Col. Albert Clark, the Secretary of the U. S. Government Commission now investigating our industries. Speaking of textile products he says, that far beyond protective tariffs and government fostering is our ability to produce *artistic* stuffs.

The cheap cotton and woolen goods and other fabrics would eventually be made in those parts of the world where labor is cheapest, and near the raw material. This change has already begun in the movement of New England mills to the cotton fields of the south; and in the years to come the loom will be transplanted to those distant parts of the world—to Egypt, to India and China—where life is teeming and labor cheap. *They* will make the more common materials, and *we* shall be able to reserve for ourselves only those grades whose production requires superior intelligence and greater artistic skill, beyond the capacity of the Hindoo or the Mongolian. Such knowledge means power, means industrial supremacy. Such a knowledge, on the art side, has its roots in, and depends for its very life upon, a thorough training in drawing.

This training may be divided into three stages —that of proportion, as in flat drawing; of form, as in modeling; and of color. These stages are more or less inter-dependent, and the pupil should have an introduction to all three, although in the industries it is seldom that all three are demanded at once. In all the building trades and construction shops it is the ability to read and render plans and detail drawings that is required. This department of drawing is now well taught in our higher and special schools, and has long left the experimental stage. In engraving, chasing and ornamental iron work, the need is great for a hand and eye able to create firm lines, graceful curves, well-proportioned areas. A hard training in free-hand drawing, ornament and design is here required. It is interesting, by the way, to note the rapid strides of ornamental metal

work in the last few years. Fences, grilles, screens, street lamps and gates in bronze and iron (many of them beautifully done) are being more and more used by architects and builders. It is industrial art of a high order. The best men in this line to-day are foreigners—men who have been subjected to the more severe training of the continental schools. This training, moreover, seems to be our greatest stumbling block.

Both the French and the Germans admit that our methods are sound and progressive, but our product so far has not been a very great success. This is due, in a measure, I believe, to a curious and abnormal spirit of independence which does not permit the student to meekly submit to a course that is seemingly hard and grinding. He wants the short cut, the early goal, the quick return on his investment. Until we have a change of heart in this matter we cannot hope to rival the European. He has come among us, and we have depended upon *him* very much in the same way as the Romans made use of the Greek workman.

In architectural ornament, in stone and wood carving, the training is through outline drawing and then by modeling in clay and wax. In pottery, in gold- and silver-smithing it is again form, and again drawing and modeling are the remedies.

Lastly we come to that large field of industries where color predominates. Oil-cloths, carpets and textile fabrics, wall papers and interior decoration are parts of this field. Outline drawing is the first step in this training; but the greatest effort should be made to develop that slow-growing faculty called the color sense. Many believe such development to be impossible. They say, "You have it or you have it not, and if *not*, then 'all the king's horses and all the king's men' can not help you to obtain it." Of that I am not sure, though I like to believe that we have all the faculties of the mind as we have all the features of the face—though some may be abnormal and some dwarfed for want (I suppose) of the proper nourishment. I believe that *some* development of color perception is possible, and that it is best attained in the schools, through handling color itself—through mixing, through matching and through analyzing color. Also through trying to select harmonious colors, when the student relies on his own taste but has the teacher's judgment as a court of appeal. The trouble is, that in some quarters the subject has become purely an academic one. Long lectures on the physics of color, abstruse talks and charts on the harmonies of color, and pretty experiments with the spectrum colors are most apt to leave the student where they found him. In one hour the few general rules of color harmonies may be given, as well as all the necessary physics. As for the rest, the student must learn by *doing*. As a matter of fact it is impossible to speak accurately about color, for the reason that out of perhaps fifty thousand hues, tints and shades, only a few hundreds have names, and these are most crude and unreliable.

Our list of industrial art subjects demanding drawing must include dressmaking and millinery. My knowledge in these lines is limited to information gained from such inquiries as I could make during the last few weeks.

In the department of dressmaking at some of our technical institutes, all pupils are subjected to a broad course of drawing from the flat, from casts and from the draped lay figure, both with the brush and pencil. Copies are frequently made from good drawings of draperies (like the Japanese) in order to become familiar with their beautiful and concise representation of fabrics. A parallel course in color and design is carried on, and both are applied in making colored designs of dresses. In the draughting and cutting of patterns a nice sense of line and form is demanded, and the authorities rely on drawing to fill that demand. They have an abiding faith in that subject, and give it an increasing amount of their school time. Their work in millinery is along these same lines, and as their results are good we are bound to believe their methods must be sound.

As a business practice, colored sketches are frequently dispensed with, especially in millinery, where the expert, high-priced designer goes to work directly on her wire frame, and with deft fingers and a fine eye for color effects she experiments with her materials until an artistic hat is produced. In school, however, the use of the sketch is wise and sound.

It does seem, by this time, as though we had reached the bottom of the list of industries requiring drawing, but yet no mention has been made of commercial illustrating, advertising and lettering, lithography and furniture designing. Immense departments are all of these, and abundantly engaging the best skill in the drawing line, and much might be said regarding their educational value.

But with this I rest my case. I trust you will agree with me when I say that few other educational subjects are needed in so many different places and in so many ways as is drawing. Every aspect of modern life bears traces of it. Many departments of human activity would suffer paralysis without it. In almost every highway leading to human achievement you find this modest servant—Drawing—doing a giant's work.

This paper was followed by another in the same general subject read by Miss Ellen Simpson, instructor in drawing in the public schools of Reading, Pa.

THE RELATION OF DRAWING TO INDUSTRIAL PURSUITS.

Many teachers and pupils are working with enthusiasm along Art lines, and find great encouragement in the progress attained. There are those who have saved drawing to the state, when there was danger of its being swept away, leaving the bones of education, the three R's, picked of many ennobling fragments of culture, and of enjoyment. All honor to those staunch citizens. May their labors be repaid by the children's advancement in Art education.

In a republic, boys and girls have a right to be trained for unexpected honors; and the liberal education of the day is none too broad a preparation for life's possibilites. It is immaterial whether our rulers rise from the ordinary ranks of life, or have upon them the gloss

of college breeding which does not always polish; but there should be the foundation for culture and honesty in all. With a noble ground-plan the routine of official duty, the refining panoply of social and court etiquette will weigh light as a feather upon the right man or woman in the right place.

There is no arena so potent in producing the qualities of a great character as the public classes; and no single branch pursued to a completion which so surely leads to the fostering of innate nobility, and honesty, as does drawing. You ask how? Shall we think of it as giving that refinement, and love of all things fair, which comes from the gradual absorption of the best in the whole realm of literature and Art?

Take any good course in Art instruction and follow its line in drawing, to prove its elevating worth. You will find the drawing course much like a wheel—its spokes attracting to themselves the best in history, romance, poetry, mathematics. If you examine the completed circle secured by the spokes, you will find it homogeneous, well developed, and able to run by itself when necessity furnishes the impetus.

The youthful knights of romance were trained in every gallant and kingly accomplishment, adding to skill in arms, the arts of Music and of Chess. To be modern, for Chess substitute Drawing, both requiring concentration of thought, and deliberation in acting, and you have that which helps the American knight in using his best endeavors to excel.

While beauties may, as it were, become part of one's being without special mind recognition, to the trained mind, errors stare at one with Gorgon eyes, and will not run to cover; therefore drawing tends to accuracy of detail, and honesty of purpose; for there is nothing so true, or so false, as the picture.

The art of drawing has a very extended role, and it is linked with all kindred subjects. For instance, it is said that judging by the general appearance of communities, women are dressed in better taste than formerly. Has not the Spirit of Art been moving upon the troubled heaps of fabrics in prismatic colors, subduing some, enhancing others, and so creating more harmony—hence more pleasing impressions upon the eye?

It is the province of all art to beautify, and we are greatly indebted to the artists in dress, for the adornment needed at each stage of life, that our bodies may fitly represent the "Temple of the Lord," and give pleasure, or, at least avoid producing repulsion, from those with whom fate's decree has cast out lot. In one of his lectures, Dr. Mabie cites the instance of an active, intellectual lady of eighty years who attended to h r own purchases. At one counter she asked for pale blue silk. With the flippancy born of want of thought, the saleswoman asked if the fabric was for her. Being answered in the affirmative, she replied, "I should think black or gray would be more suitable for an old lady." To this polite suggestion the lady replied "Yes, my dear, when I am old, I shall always wear black or gray." The pale blue silk was, perhaps, as charming for vigorous age as for elastic youth.

Much of the improvement in dress is due to greater skill in drawing, nearly all women being able to measure, and draft patterns to mathematical proportions. You remember, perhaps, that when the great French painter, Meissonnier, married at twenty-three, his household goods consisted of a trousseau of old sateen breeches, colored stockings, buckled shoes, long waistcoats, vests with wide pockets, felt hats, wigs—all useful articles for clothing his models. The things he could not pick up ready-made, his wife manufactured from patterns which he drew. Artist and dressmaker hand in hand! What a wife was there! That was as far back as 1836.

Probably the most pronounced illustration of the advantages derived from a progressive study of drawing, is seen in the line of manual training—especially where a creation showing refined taste, and a true sense of the beautiful, are indispensable to the popularity of the manufactured article. The artist, pure and simple, does not bother with the technicalities of the mechanical school, and he cares not a straw for either the first or the third angle; but to the superintendent of great manufacturing interests, the whole value of an assistant hinges upon his understanding the working drawings necessary in the business, and his ability to accurately and practically make his own drafts. How is a man to make himself valuable in this line? It cannot be done in his maturity, by swallowing the elephant whole—there must be slow digestion and gradual assimilation—ears, eyes, organs of locomotion all interested at once. The most natural time for this assimilation of facts is when the future machinist is a boy—a boy with his mischief and carelessness trained into accuracy, because he must give the best and most truthful part of his being to his work. "Noblesse oblige!" and truly does this apply to the capable machinist.

"My son knows more now than I do, and if they keep on teaching in the schools, we fathers will have to step off the platform." This is no argument for keeping a boy ignorant of trade requirements. Instruction does not create experience, nor can skill supplant it, but, without either, the man will be sadly handicapped. Let mechanical knowledge be part of his education, just as arithmetic and geography are, then there will be no thought that the object in view is the evolution of a carpenter, or of a machinist. There is no necessity of creating spots on the sun, for, as twentieth century developments crowd upon us, and the recognition of the brotherhood of man increases, the fathers need not fear; there will be room and work for all.

As in your travels you set your face toward the center of Pennsylvania, you will probably arrive in a stretch of land where there is a clear running spring, around which some industries have clustered; and if you choose to climb Mount Parnassus (Penn.), you may look down upon the gods in the valley. April 13, 1901, a boy entered one of the trade centers found in this valley, and asked for a tablet for drawing. In the course of the transaction, it became necessary for him to say that, "When he had a cellar to dig, he liked to make a drawing of it." Other boys dug where they were told, this one was not compelled to make a plan of his work, and he was spending his own money that he might do his daily digging correctly.

Where did he get the idea, and the ability to draw the plan of the cellar to be dug? In the public school. For such a boy, the flash of future success glints from the star of intelligence on his forehead, as he hands his silver coin in exchange for the tablet. Let this spirit of doing right for right's sake spread the ability of the trained mind, eye and hand over the country in its length and breadth, just as liberally as farmers sow clover seed to plow under, for improving their land; then the trooping children seen on the far horizon will be attracted to learning, because their predecessors have gathered out the stumbling blocks, and destroyed the thorns.

The discussion was continued by Assistant Supt. Lydia A. Kirby, of Philadelphia, who said:

One of the advantages of being one of the last speakers is, that much of what one intended to say has been said by others, and one is spared the trouble of saying it. It is now too late to make more than a few remarks.

Once upon a time, parents sent their children to school and then let the school do as it would with them. They felt no concern in the matter. Now, there is quite a different state of affairs. Parents scrutinize the school curriculum, discuss the amount of study required, and criticize the teacher's methods. This subjects the school to an amount of criticism both just and unjust. The latter is not made with malice, but results from the difference between the point of view of the educator and that of the parent.

To-day the public requires that the studies shall be of *practical* use to the pupil. It is not what does he know? but what can he do with what he knows? The public furnishes the pupils and the money for the schools, and the more the parents become convinced of the value of the instruction the more readily will they spend money for the support of the schools and for the salaries of the teachers. We must cater to this public, and we must educate it to see things from our point of view.

If drawing is to hold its place among the many studies that now crowd the curriculum, its value to the every-day work of the world must be proved. You may show clearly its æsthetic value, but they answer, "We can do without that."

Former papers have proved its value to artist, artisan, and manufactures; I was asked to say a few words about its value to the women in their homes. It seems to me that a thorough study of beautiful forms and of harmonious colors should greatly improve our dress and our house-furnishing. We should no longer be willing to have wall paper and carpets that antagonize each other, curtains that relate to neither, and a miscellaneous collection of ornaments that litter instead of beautify the room.

Our dresses should suit the human figure rather than conform to the requirements of fashion. We have then a different standard by which to judge of what is proper. Graceful designs drawn; beautiful, graceful, natural curves of leaf and flower should help us to trim our hats correctly and prevent some of the extraordinary effects that we now tolerate. We would detest them if our æsthetic taste were more highly cultivated.

In teaching our school children in Philadelphia to draft their own dresses, our teachers used the Rood System of Dress-cutting. They bought the system, but they taught the children with the aid of a ruler only. The agent would not believe that this could be done, and she was invited to come into the class-room and see it done. This she did and was convinced. Our pupils were enabled to do this from their knowledge of drawing. Whatever the teacher drew upon the blackboard the children could imitate exactly. Also in arranging trimming their taste and originality were shown.

This knowledge is far-reaching. It enters into the home of the poorest as well as the richest, and makes both more beautiful without greater cost. This is part of an answer to the question, "What can you do with it?"

In further discussion of the subject Professor Charles C. Heyl, of the Northeast Manual Training School, Philadelphia, said:

I must place the relation of father and son as exactly indicating the relation existing between constructive work and constructive drawing. The work begat the drawing and the drawing has made itself an indispensable adjunct to the work. As long as this world is a world of work and so long as man possesses the desire to do effective work and to do it as economically as possible, just so long will he endeavor to make two dimensions in his plan represent three dimensions in his project. This is but one striking example out of the many in which a physical simplification of the means has made possible an extended elaboration of the

end. Our biblical account of the erection of Solomon's Temple informs us that the various parts of the edifice and its fittings were constructed, not from drawings or plans, but from patterns or models. The artisans of the day required a solid scale-model for the construction of a solid project—an expensive and cumbrous scheme. But with the advance in the intellectual attainments of the race, came the ability of the designer to convey his ideas in two dimensions only, by means of a certain accepted symbolism. Also there came the training of the artisan in the ability to read this language and to give it its proper expression in solid form. This change marked a great decrease in the physical labor of designing a structure, a concomitant broadening of the opportunity for intellectual exertion in the use of his symbolic language of drawing.

The child cries for the moon, and fails to realize that the bright, attractive object is not in the same plane with the bars of the window through which it is seen. It is very annoying not to be able to pick the gaudy flowers from the wall paper, and much painful experience is necessary before the child learns that only certain subtleties of light and shadow mean solidity, and that certain haziness of foreground appearances or conditions of visual focus mean distance.

It requires an educated set of visual and imaginative faculties to appreciate space of more dimensions than two; but, given this necessary education, two dimensions can be made to do duty for three, in an eminently satisfactory and economical manner. And therein lies the incomparable value of drawing in constructive design. It is a *universal* language (though one of many dialects), a knowledge of which is THE KEY to success and economy in the making of things the world over.

THE KINDERGARTEN.

THE Conference on the Kindergarten was held Wednesday afternoon, in the assembly room of the Commercial High School for Girls. It was conducted by Mrs. Letitia P. Wilson, of Johnstown. She complimented those present on their bravery in coming out on such a warm day, and said that it was an evidence of growing interest in the work that there were about three times as many in attendance as at Williamsport the previous year. This was to be expected, however, in Philadelphia, where the Kindergarten work of the State had its beginning. She then introduced Anna W. Williams, Supervisor of Public Kindergartens, of Philadelphia, who made the following address of welcome:

We may have warm discussions today and may find ourselves widely apart, as independent minds are wont to be, but the unity underlying all our diversity is the appreciation of the establishment of the Kindergarten as part of the educational system of our State. We appreciate, too, the cordial recognition of the Kindergarten by the colleges and universities. You all know the attitude of President Eliot, of Harvard, and our own Bryn Mawr. In the latter college the pedagogical course includes a knowledge of the principles and methods of the Kindergarten. These are the means of emphasizing the fact that isolation should be a thing of the past. The conviction of its importance by the college presidents, superintendents of schools, and even the primary teachers makes it more than ever desirable that we should be able to hold fast to that which is good.

The two requisites of progress along any educational line are a broad scholarship and the possession of personal power by the exponents of the system. If the kindergartner has the former she will be able to follow truly the maxim, "Come, let us live with our children," and not be led astray by "Come, let us live with some one's else idea of children." If she possesses power she will command respect for her course and be strong to stir the most intelligent public opinion. We need efficiency and scholarship, but we need power for future progress. We who meet the coming generation on its threshold, to lead it to goodly habitations, want gradually to grow more professional, to have increasingly broader preparation in our training schools, higher ideals, more insistence on coöperation with higher schools, and above all let us maintain our professional pride.

Froebel, we all know, awakened the minds of twelve little children and fed them with the bread of life only after a prolonged university education. From such measurements of the master we can obtain an idea of what he deemed the birthright of every child, and a follower

is inspired to learn from every avenue. Let us remember, too, that the true source of power lies in a life of service. The doctrine of Christian theology as well as of modern philosophy teaches that he who loseth his life shall find it.

The Kindergarten movement has been upward and onward, and, with the herculean efforts of a few brave women, has swept every obstacle from its path, and only will its future progress be secure by obedience to the timely message, "Learn all you can, be all you can, and devote all you have and all you are to the service of childhood."

So I give my welcome, not in many or eloquent phrases, but none the less sincere. The answer to the problem of the security of the Kindergarten lies in the breadth of Kindergarten scholarship and the power to make the value of the Kindergarten clear to the highest public opinion. It is within the province of the woman whose only purpose is aspiration for the best, to make this question a burning one. In the words of George Herbert, "The torch doth show the way," and we in Philadelphia consider ourselves honored that your light is shining on us for a few days. It will help us to a larger faith in the possibilities of the Kindergarten, for we have "the wild desire, delirious yet divine, to know."

Miss Mary Schwarburg, of the Pittsburg and Allegheny Kindergarten Association, then read the paper on

NATURE WORK IN THE KINDERGARTEN.

In our discussion of this subject no scientific dissertation will be attempted, only a few plain everyday facts presented, the result of observations that can be made by everyone. What we desire to do is to show practically what can be done with nature work in the kindergarten and the results of such work. Reading what others have observed about nature lacks the freshness and freedom of original investigation. Seeing nature with other people's eyes, reading their thoughts about her ways is most delightful, after one has seen and thought for one's self. Nature study is not teaching science, it is seeing and understanding the common objects of the external world. The ideal nature study inspires a longing for opportunities to watch for one's self the wonderful things that are and that happen in wood and field. We should always "look through nature up to nature's God."

"He prayeth best who loveth best
All things both great and small;
For the dear God who loveth us,
He made and loveth all."

An aquarium is an all-absorbing, fascinating source of interest to the little ones. The queer capers of the living occupants, the life presented in another environment from their own never fails to excite the curiosity of the children leading them to discover how these creatures maintain their life. We found an oblong glass box the best foundation for an aquarium. Water plants, sand and animals are next in order. The plants may be gotten from a pond or from a conservatory. Such animals as tadpoles, water boatmen, beetles, spiders, snails, minnows, gold fish, sun fish, may inhabit the aquarium. Catfish need to be in a separate home. Place the plants in the sand and gradually pour in the water on a paper and your aquarium is ready to be stocked. If your aquarium is made in the spring the eggs of toads and frogs may be obtained and the development from egg to full-fledged toad or frog is most exciting and interesting. We have had these in all stages of development, large and small, front legs and back legs, tails and no tails. The older brothers and sisters coming to our room as a reward of merit in their own room would see the inhabitants of our aquarium and they would often bring us crabs, minnows and turtles. It was a common thing to be greeted on the street with this salutation: "May I bring you some tadpoles?"

A turtle was given us one spring, and it was a constant traveler. It visited the homes of all the children. Some child took it home every day. When it was given to us we did not know how to care for it, so we allowed the children to find out what it would eat. They found it ate meat and bread, but its most delicious morsel was a worm, so this became its favorite diet. It got over its timidity. When we first put it on the floor it never made a move; now it walks all around, not noticing how large the company about it. One summer vacation it boarded round and returned to us hale and hearty after its summer outing.

One little girl who had been promoted to the primary grade came with two of her brothers to the Kindergarten one morning, their faces veritable sunbeams. They handed me a box and said, "It is not a butterfly this time." The week before they had brought a cocoon from which came a butterfly the next day after it came to us. We felt the box, and said, "How heavy! We cannot guess what is in it." On opening the box imagine our surprise and delight in finding a very large turtle. An older brother had found it, and its place was the Kindergarten. The children were eager to show me how it could shut up its house, spoke of the marks on its shell, and how it swam and what it would eat. Think how these eyes had been opened. All the information obtained through their own observation. Little Mary realized to the full the blessedness of giving to others. Verily for her "it was more blessed to give than to receive."

The autumn of course, is the time to collect cocoons of all kinds. The caterpillars themselves can be found and the whole transformation from worm to butterfly observed. Nasturtium worms are very satisfactory for this purpose. They can easily be secured and they turn into cocoons and the little yellow butterfly makes its appearance. One year we kept the cocoons all winter and the butterfly emerged at the right time in the spring. Another year we had green worms, cocoon and butterfly within three weeks.

STERHOUT
WILKES-BARRE,

We have a pasteboard box whose sides and top were taken out and replaced by wire netting, earth was put into the bottom of the box and this has been the home of many kinds of caterpillars.

The children would bring them and we have had many varieties. The green worm found on the "four o'clock" was brought last fall. It was kept all winter and this spring came out in Kindergarten one morning a beautiful moth. The child who had brought the worm was there that morning and great was his delight. He immediately said, "I will bring lots more green worms when they come on the four o'clocks." Cabbage worms, grape-vine worms, milk-weed worms have all had a home with us.

The large cecropia moths have been a delight to us. We had about twenty-five cocoons one year, and morning after morning the beautiful moths were greeted with intense delight by the children. Their interest never flagged. They only wished for more when the last moth had made its appearance. The children have brought us many cocoons different from those we had had in the Kindergarten, but from their resemblance to what they had seen they inferred that they were the homes of some butterfly. One child after being promoted to the next grade, brought a cocoon and the next day a brown moth emerged.

We took it to her room and her eyes seemed twice their normal size when she saw it. The teacher said privately, "You don't mean that Mary brought you that moth! Well, if you knew all her home life you would, indeed, think that wonderful."

Spider's nests have had a place in our observations. Where can be found greater exactness, order, nicety of adjustment, carefulness than is shown by the spider in the making of its nest. The outside is airtight and waterproof. The little sack inside, cradled in silk, each egg in the sack laid exactly in its place, the whole covered with a lid which is indeed no misfit. We had the pleasure of watching a spider spin her nest.

Last autumn one of the children found some mud wasps in their home for the winter. This spring they ate their way out and were viewed with wonder by the children. Two little girls spent a few days in the country, one brought a bird's nest, the other a tiny wasps' nest. The mother said, "Indeed, it would have taken a bushel basket to hold all the children wanted to bring to the Kindergarten. I didn't see half the things they did."

One of our most interesting observations has been the life of the silk worms. This spring we gave the eggs all through our school, thirty-five worms, and the interest has been intense. Applications came almost every day for eggs, the children from the rooms coming and saying, "I would like to have some at home. Papa never saw a silk worm, and we want to watch them." Many have spun their cocoon, and the pupils have been able to see egg, worms cocoon, butterfly and egg again. We have learned how they ate, what they ate, how often they moulted, where the silk comes from, how long they are in the cocoon before coming out moths, and many other interesting facts.

In the springtime we desire to bring to our children as much as possible from the heart of nature. We of the city cannot always take the children to where the wild flowers grow, so the next best thing is to bring quantities of them to be planted in boxes or pots. We are very fortunate in having a large violet field near our school, which is in a downtown district. The children picked violets and dandelions to their hearts' content. Hepaticas, arbutus, bloodroot, Jack-in-the-pulpit, anemone, trilliums, columbine, ginger root, adder's tongue, Indian pipe, bellwort, wild geranium, Solomon's seal, Dutchman's breeches, have all had a place in our Kindergarten this spring.

The planting season is an interesting time. Those who are fortunate enough to have ground can grow all kinds of seed. We will give only the experience of those who have brick yards for gardens. We used many flower pots; planted nasturtiums, pansies and radishes. We ate the radishes before the Kindergarten closed in June.

Then we had egg-shell farming. Each child brought an empty egg shell from home out of which he had had his breakfast. Squash seeds and earth were provided him and he planted his seed in his egg shell.

These were put in the window, and the children cared for them. After four leaves had appeared they were taken home by each child and planted. In the fall when we were asking about the pumpkin vine, one child brought me the picture of himself, the vine, and one large pumpkin. His mother had made twelve pumpkin pies out of it. This was grown in a small front yard in a city. This spring we had great quantities of sunflowers, so we supplied five kindergartens with the young plants. The care the children have taken of the plant has been wonderful. So say the mothers. We expect to have great quantities of sunflowers in the fall. The children will have seen the round of development from seed to seed.

Great quantities and varieties of seed can be gathered in the autumn. Get them on the pod showing nature's great prodigality. They may be classified according to their mode of travel: The shooting seed, the violet and castor bean; the sailor seed, the hop; the snow seed, the locust; the balloon seed of the milkweed and cat tail.

The stringing of haws, the balloons of the milk weed, the making many things out of burrs afford infinite pleasure to the children.

The splendor and gorgeousness of nature's fall attire is made apparent by bringing to the little ones the red berries of the haws, Jack-in-the-pulpit, false Solomon's seal, the dogwood, and the asparagus.

Hazel, beech, walnut, hickory nuts, butternuts, chestnuts, horsechestnuts, show the great variety in the storing of winter foods. Sense games can be played, and this description of the nuts is taken with pleasure by the children.

> The acorn with its little hat,
> The butternut, egg-shaped and fat,
> Three cornered beechnuts, thin of shell,
> The chestnut, burred and armored well,
> The walnut with its tight green coat,
> Close-buttoned round its little throat.

Miss Blow says as children mature they should hear and learn poems. Froebel says

early youth language representation should assume a rhythmic form for this is its first form in the youth of mankind.

So in our nature work the following little gems have found a place:

When robin red-breast sings
We think of budding springs,

The swallow is a mason,
And underneath the eaves
He builds a nest, and plasters it
With mud and hay and leaves.

Of all the weavers that I know,
The oriole is the best;
High on the branches of the tree
She hangs her cosy nest.

The woodpecker is hard at work,
A carpenter is he;
And you may hear him hammering,
His nest high up a tree.

"Who likes the rain?" "I," said the duck,
"I call it fun, for I have my little red rubbers on;
They make a funny three-toed track
In the cool soft mud. Quack, quack."

This of the dandelion:

With locks of gold to-day,
To-morrow silver-gray;
Then blossom bald,
Behold! O man, thy fortune told!

A description of the milk-weed:

See them fly, see them fly,
From the cradle where they lie!
Hear the wind soft hum,
"Pretty babies, come!
Spread your shining silky wings.
You may fly, you pretty things.
Flutter here, flutter there,
Through the autumn air."

A fairy seed I planted,
So dry and white and old;
There sprang a vine enchanted,
With magic flowers of gold.
I watched it,
I tended it,
And truly by and by
It bore a Jack-o'-lantern,
And a great pumpkin pie.

What plant we in this apple tree?
A world of blossoms for the bee,
Flowers for the sick girl's silent room,
Fruits that swell in sunny June,
And redden in the August noon,
And drop when gentle airs come by
That fan the blue September sky;
And children come with cries of glee
At the foot of the apple tree.

Miss Kate Spencer, Principal of the Kindergarten Training School at Erie, Pa., being unavoidably absent, her paper was read by the Chairman, the subject being the

EDUCATIONAL VALUE OF KINDERGARTEN.

An old German legend tells us that long years ago man was given a beautiful harmonious song to sing—a song of Truth—but one day Discord interrupted the singing, tore the music into countless shreds and scattered them to the four corners of the earth. Ever since, in different parts of the world, fragments of the song of Truth have been found and each one who finds a fragment thinks that he has secured the perfect song, yet when he sings that part alone no harmony results. It is only as each one brings what he has found and the angels fit them together into one complete whole that the song becomes perfect again.

This legend comes to us as an inspiration in our work, for we know that the Kindergarten can never hold all truth within its circles, but that the truths that we hold fast to-day are but parts of the large perfect truth toward which all education has been tending.

If, as Froebel said, "All life is one continuous whole, and all the stages of development are but links in the great chain of existence." then education must be a continuous process governed by the same laws throughout its entire course. The only difference we will find, or ought to find, in the Kindergarten, primary school and higher grades will be, not a difference in principles, but in the methods of applying these principles so as to meet the needs of each stage of development in the child's life.

The Kindergarten cannot be an isolated institution governed by laws that apply to it and it alone, an institution in which children are taken for a certain period in their lives to be aided in the development of this one period alone with no preparation for a higher grade or for future life. Such a thought is far from our thoughts as kindergartners, for our work is not an end but a means toward the perfect whole for which all true teachers are striving.

Froebel came as the "discoverer of childhood," and what he did was to put a little child in our midst and bid us study him, with the thought constantly in our minds, "How can I help him realize his highest possibilities?" Each child, whether he come from alley or boulevard, hovel or mansion, brings his own problems for us to help him solve, and how can we as teachers guide him aright without special preparation for this great work.

Some one has told us that if teachers are to work intelligently, "they must know something of the child's physical life, mental processes and moral tendencies; they must have some idea of what the child should become, and of the distinguishing characteristics of various periods of development; they must be familiar with the means to be used in effecting these changes, and they must also be capable of using these means in an effective manner." To accomplish this object we provide for our students in the Kindergarten Training Schools a two year's course in Psychology, Pedagogy, Kindergarten Methods, Literature, Manual Training, Art and Music. In this study we are striving to give a practical basis for their work so that they may know the end and aim of education and the right methods to use so as to avoid misdirection and waste.

We believe that education is character-building, and requires the development of all the faculties of the heart and mind. The child has other faculties beside that of memory—he feels, reflects, acts and invents, and opportunity must be given for all his faculties to develop if he is to realize his greatest possibilities. We owe to Froebel the discovery of the truth that the child, in the main, repeats the history of the race—that he comes into this world with much the same endowments with which primitive man began his life, and that he comes into possession of his powers in the same way as the race has done before him.

As we see man to-day with the forces of nature at his command, with his finely developed

mental powers, with his high moral sensibilities, and then compare him with our primitive forefathers, living in the woods, eating the roots of plants, in the midst of Nature—yet awed and terrified by all the wonders of Nature, we begin to ask, "What has accomplished this great change?"

John Fiske says that the gradual lengthening of the period of infancy was the first greatest help in the development of our forefathers. As their intelligence increased the period of infancy was prolonged; a surer foundation was needed for the larger superstructure. Thus, instead of being born with a simple organism completely developed, like the lower animals, man came at last to be born with the germs of a most complex organism which must be developed gradually by its own self-activity. In spite of the great future in store for man, primitive man was allowed a long infancy in which to learn of the world about him and to gain possession of his own powers. He was endowed with the instincts of activity, curiosity, imitation, emulation, construction, etc., and then he was placed in the midst of nature, with plenty of objects around him to awaken and develop these instincts, and plenty of material with which to carry out his ideas. Had he not been endowed with these instincts, or had no opportunity been given for their activity, his development would have been impossible.

The instinct of curiosity prompted him to investigate and find out about the things around him, the instinct of construction prompted him to build, the instinct of imitation prompted him to repeat what he saw others doing, gradually adding something of his own originality; the instinct of emulation prompted him to strive to equal or excel his neighbor, and thus by constant exercise of the faculties he already had, these faculties were strengthened and the higher faculties were developed.

Can you imagine what it would have meant in our forefathers' development, if their instructive acts had been suppressed and they had received their education with little effort on their own part, and that effort mainly one of memory? If they had been *told* all the facts they ought to know instead of being led to make these discoveries for themselves—had had everything done for them instead of being led to do for themselves?

But such were not Nature's methods. Man was led to be, in each stage of his development—by his own efforts—all that that stage demanded before he passed into a higher stage. So, if we would follow nature in the education of our children, we would supply the needs of each stage of their development, refraining from forcing or coercing them in their growth, for we would recognize infancy as the foundation on which is builded the future life of the man and woman, and in that future life we see the result of the development commenced in childhood.

One of the tendencies of the present age of rapid transit and wireless telegraphy is to strive to hurry along this period of infancy—vainly thinking that in this way valuable time may be saved for the future—which reminds us of the small boy with his tadpole, who, in his anxiety to have the frog appear, and learning that the tadpole must first lose its tail, thought he would assist nature and cut off the offending tail.

We see much the same process going on in the child's world. Nature does seem to work so slowly that, in our ignorance, we too try to assist by cutting off any appendage that seems, in our eyes, to bind the child to infancy. But if we take him away from the concrete before the right time and try to turn his thoughts to the abstract we are working against Nature, for psychology tells us that in the early years of life only the concrete, only the real things that appeal to the child's sense, can cause mental activity; and without activity there can be no growth.

If we would have all of the faculties of the child developed, they must all be given the right incentives to activity at the right time. This is according to the educational principle that a child develops through his own self-activity—but we must first find out how much of the child is active at this time and of how much self-activity he is capable, else in our ignorance we might appeal to brain centers before their period of nascency, which would only hinder the natural development of the child. At the Kindergarten age—that is, from three to six—the brain centers that control the activity of the senses and the majority of the instincts are developing, so in the education of this period those means must be used that will make the best use of these active senses, and will so stimulate the instinctive acts that they may be rooted in good habits.

When the average child has reached the age of three his social instinct has so developed that he demands children of his own age to play with. Nature is prompting him to seek the very means that will most help him at this age. "Man is by nature a social being, and a child can no more be happy without the companionship of his equals than his father can." He needs the help and inspiration that his own compeers can give him, and as he works and plays with them he is learning to respect the rights of others, and that others have equal rights with himself; he is learning to adjust himself to others, to be more patient and unselfish, and is given a greater incentive to do the best work he can. Children probably learn as many useful lessons from the teachers of their own age as they do from adults.

And by "their own age" I mean those that are their equals in development; a year or two often makes a great difference in children, so the brothers and sisters do not supply all of the demands of this social instinct. They wish to test their powers with those of equal development. The instinct of emulation needs these conditions before it too can do what it ought for the development of the child.

His instinct of investigation is so developing at this period, that the child wishes broader interests than the nursery supplies. He wants to find out more about the world in which he is living—just as his ancestors did before him. He is now ready for a larger field of action. His instinct of imitation bids him imitate the work he sees around him, and by this imitation he is learning better to understand this life in which his interests are centered. His creative instinct prompts him to express his own

thoughts in tangible form, and by intelligent *doing* to help in his own development. And so on through the long list of God-given possibilities that must be wisely aided in their development if complete living is to be the result.

So in the Kindergarten, in accordance with the mind's own development, we find, that in place of reading, writing and arithmetic, those subjects from nature, from the child's own experience, and from the life in which he is interested, are brought before his mind under such conditions, that through the resulting self-expression, all his powers will be exercised and strengthened.

We must first choose a subject about which the child already knows something, so that we can connect the new with the old—let us take for example the work of the carpenter in our own homes. After a visit to the carpenter shop to see him at his work, after the songs and stories that still further awaken their interest in this helper, after looking at the different tools that he uses in his work, and finding out what each tool can do, the children have received a number of impressions, their senses have been active, but the work must not end here, for while a part of the brain has been made active by the receiving of impressions—that is, the sensorium—another portion, the *motor* area, has been left inactive, and before the circle of thought can be complete and the whole child be active, both areas of the brain must be active—the *im*pressions must become *ex*pressions. There must be impressions given, these impressions must be assimilated and their *ex*pression must follow before true self-activity can be the result. If we are content with the first part of the process alone, then we are allowing a great waste of the child's mentality.

But after the child is thoroughly interested in this subject—or any subject—and has received a sufficient number of impressions, he wants to give some expression to his ideas. It is not enough for him to tell about them alone. That requires too little activity at this age of almost perpetual motion, and we wish to make use of all of his activity. So, as nature prompts him to *do*, to make something as the expression of his thought, we give him the most suitable material with which to carry out his own ideas —no matter how crude the result may be—and we see him with his blocks building houses like the carpenter, or with real hammers and nails making ladders, chairs or tables, or with clay modeling the different tools. The things he makes are of no value in themselves, but only in the amount of good they have done the child in making them, in the activity they have given to the different faculties.

Our aim is to help the children gain possession of their mental and moral powers as well as their physical. Whatever we give the children in song, story and work, we take into account the active body, the inquiring minds and the growing moral nature, so that there will be no waste of the children's faculties. We try to make the best use of their activity, which was given them to help in their development, not to be used for mischievous ends, nor to be suppressed by adults, but to be guided by them into the right channels. The children are bound to be active in some way, so we are trying to direct this activity toward character-building.

In this work with real things the child is adding to and strengthening his stock of concepts which he carries with him into the primary room.

Stanley Hall says: "The children's ability in school depends on the number and strength of their appropriating concepts. If there are very few, teaching is like pouring water from a big tub into a small, narrow-necked bottle. A teacher who acts upon the now everywhere admitted fallacy that knowledge of the subject is all that is needed in teaching children, pours at random *on*to, more than *in*to the children, talking *to* rather than *with* them, and gauging what he is giving to them rather than what they receive."

All now agree that the mind can learn only what is related to other things learned before, and that we must start from the knowledge that the children really have and develop this as germs, otherwise we are talking to the blind about color.

The children would be like Alice in Wonderland, who, after reading "Jabberwock" was gloriously filled with *facts*, but entirely ignorant of their meaning. One little child came home from school and proudly said, "Oh, mother, I can count. My right foot is one, my left foot is two, two feet and one foot make three feet, three feet make a yard, and I wish I had one to play in."

Dr. Hall says that the best preparation parents can give their children for school-training is to send them to a good hygiene kindergarten. After gathering statistics from a large number of primary teachers he makes this statement: "Kindergarten children are better fitted for school work than those who have not had this training, having superior use of language, skill with the hand, quickness, power of observation, singing, knowledge of number, love of work, neatness, politeness, and freedom from the benumbing school bashfulness."

The Kindergarten does not claim to produce prodigies, nor to make brilliant scholars of dull ones, but it does aim to give all children a normal, happy, healthy awakening. They are learning to think for themselves and to carry out their own thoughts into action, and are learning not simply that they may know, but that they may do, and through doing what is wise and right build up the characters which are to make them what they can be. For intelligent doing has been found the best aid to character-building.

The paper on "Literature for Mother and Child," announced for Mrs. Herman H. Birney, was not read.

There was no discussion of either of the papers presented, and after reëlecting Mrs. Letitia P. Wilson, of Johnstown, chairman for the ensuing year, it was announced that the Conference would make a formal request that the Kindergarten become a regular department of the Pennsylvania Educational Association.

The Conference then adjourned.

COUNTY SUPERVISION.

THE Department of County Supervision met in the Lecture Hall of the Normal School Building, Supt. J. George Becht in the chair and Supt. O. C. Gortner acting as Secretary.

State Supt. Schaeffer was introduced, having been announced to speak on the "Relation of the State Department to the County Superintendents and of the County Superintendents to the Department." This mutual relation, he said, should be warm and cordial, but not red-hot like the weather. [Laughter.] He regarded every Superintendent in the Commonwealth as his own confidential adviser, and would take this occasion to express his sense of obligation for advice given in local questions, which enabled him to look at the case through their eyes. Perhaps no truer word had ever been spoken than when the attempt was made to abolish the county superintendency, and Dr. Hickok asked, "How shall we administer this school system after you have smashed its backbone?" When we compare our system with others we find some of them lacking just this backbone, which enables us to enforce to the best advantage all good legislation, and minimize possible evils. The State expects every Superintendent to do his duty, not in a spirit of blind subservience, but of cordial coöperation, and for this he has the right to rely on the Department. Like General Grant, we expect our officers to do their own thinking, to take the initiative in the inauguration of movements in the interest of education. The true theory of a great system of public schools is that the several communities shall be left to regulate their own affairs as far as possible, and not have them regulated from the capital. The superintendent who is worthy of his office knows better than any one else the needs of his county, and how to manage his institute, his examinations, his visitation. As we of the Department do our own thinking so should he do his—all working in harmony to the great end of making the public schools so good that nobody shall want any other kind to exist. [Applause.] The schools are for the children, and have the right to exist only so far as the work of education is done. Sometimes our friends wonder, when they hear of proposed legislation that is regarded undesirable, why they do not hear of the Department fighting it. Often it is unnecessary; in other cases we have needed legislation in progress at the same time, which will be completed before the objectionable matter is reached, and do not consider it wise to antagonize anybody until we must. He closed by repeating his expression of gratitude for the help already given by Superintendents, and the hope that all would join hands in the fight against ignorance, to banish illiteracy and establish a thoroughly efficient and complete system of public instruction. [Applause.] He thought he had earned their gratitude for one thing—refraining from a formal address at this stage of the thermometer. [Laughter.]

The Chairman said he thought every superintendent reciprocated the cordial spirit manifested by the Department and was prepared for mutual helpfulness.

A paper was then read by Co. Supt. W. A. Snyder, of Clinton County, upon

SOME PROBLEMS TO BE SOLVED.

Years ago, Dr. Brooks, in a lecture on "The Problem of Life," said, "Man is by nature a solver of problems." The busy business man in his efforts to anticipate and satisfy trade conditions, the doctor of divinity and the humble exhorter seeking to fathom the means of accomplishing universal salvation, the scientist spending years of exhaustless research to penetrate nature's mysteries, the psychologist absorbed in his efforts to establish some law of mental activity—these and many others induce the belief that the quality of an investigation is an inherent one and that man is not an unwilling gladiator in the arena of problems that confront him. The man who drifts with the current may have a pleasant time, but the individual who rows against the stream gets the muscular development. The public official who floats on the crest with the populace may have pleasant sailing, but if he advocates with vigor principles in which he believes; reforms, the product of his best judgment; the benefits accruing are to his constituents and himself. Aggression strengthens his mental fibre and brings out the best that is in him. The superintendent must ever be a potent factor in the educational problems of his district.

The faddist has his uses. He is usually an ardent advocate of his particular dogma. He may see things in small circles with his particular doctrine the center of each. His enthusiasm may be contagious and his followers may soar through space, heads in the clouds, footing lost sight of. It is quickly discovered that that is not the natural habitat of man, and the descent is usually as rapid and more painful than the ascent. The dross has been removed, the merit, if there be any, remains.

The role of faddist badly becomes the super-

intendent. He may be an ardent devotee of child-study. He should be of the child. The child-study based on love and sympathy for the child is everything. Every movement that brings us nearer to the particular child contains elements worthy of earnest support. The child-study that counts the number of times a child winks in a given time, that measures the pace of thought movement, is rot run riot.

In all movements along educational lines, conservatism followed by aggressiveness, when the merit of the cause is substantiated by test, is better than snap-judgments in whose wake follow waning and vacillating efforts to carry into effect. The problem is to sift the educational vagary from the genuine product. Pope's rule applied to words is equally common sense in measuring the utility of educational reforms.

The attitude of the superintendent toward the provisional certificate is worthy of consideration. The number issued must be limited. The teacher who is satisfied to teach year after year on this kind of certificate, with marks that indicate the ability to pass by a narrow margin, needs to be severely jolted, and if that produce no effect, he must be summarily eliminated from the fold. It is unfair to the successful teacher with better equipment to be placed in competition with this class. All that some school boards require is a legal certificate; the grade, the kind, is of little consequence. It is a superintendent's duty to guard zealously the interests of his good teachers and this can not be done if the number of those eligible to teach is much in excess of the number to be employed. Our provisional certificates were all issued this year at one time after all the examinations were over and then to the best only, up to the number usually employed on that grade of certificate.

Nothing will go so far in the solution of the rural-school problem as adequate compensation for the teachers employed. Pay the price and the properly trained talent will be forthcoming. Teaching in the country districts can never savor of professionalism until better wages are paid. Teaching will always be a stepping-stone until the remuneration is sufficient to attract people to it permanently.

The farmer who readily sees the difference between a fifty-dollar horse and a hundred-dollar horse, must be made to feel that the same principle applies in the teachers employed. Too many are well satisfied if the school be but kept open. In the commercial world, the farmer usually knows he cannot buy something worth having for nothing, and that the measure of value is the price paid.

The superintendent must be consistently and continuously the apostle of better wages and in so far as he is successful he contributes materially to the betterment of the schools under his supervision.

The superintendent is vested with very little plenary power as an official. It is perhaps as well that he is not. Arbitrary authority is easily abused. Tyrannical bluster wins not more than courteous argument. The vast majority of people are disposed to do as well as they know, and, if properly approached, more lasting good can be accomplished than if the spirit of coercion were apparent. The superintendent who has the confidence of his teachers and directors is always assured of an attentive hearing.

The county institute is always a source of anxiety to him who is responsible for the programme. If only all the instructors who think they dole out celestial coin were as good as they think they are the problem would be much simplified.

For us, we are fully satisfied if our institute broadens the teachers' views; if they see more clearly the purpose of their instruction; if they are made anxious to know more of the subjects they teach; if they are made to feel the character-building phase of their personality in teaching, and if they interpret their responsibility. We are not satisfied to make our institute simply an entertainment. We do not object to a good story that illustrates something. We do object to the funny story as a characteristic of our institute when the sole purpose in its telling is to "catch the galleries." Local conditions, to some extent, enter into the institute problem, and each superintendent knows best how to make the work most helpful to his people.

The most unsatisfactory part of a superintendent's work is his supervisory work. One or two visits is the limit, usually but one for most superintendents and that a short one. General conditions are quickly determined. The teaching, the most important of all, is not so easily measured. One visitation may create a decidedly favorable impression, while a subsequent visit, with the work entirely changed, may dispel the former favorable judgment. Teachers rarely teach all branches equally well.

The superintendent must be more than a peddler of devices. He must deal with educational principles rather than with set methods of instruction. Imitation on the part of teachers is purely mechanical. The teacher who is desirous of improving and willing to work will solve the problem of best methods for him.

The function of the superintendent is to stand eternally for progression, better work, enthusiasm, investigation and a desire to improve constantly. In so far as he accomplishes these results, he will succeed so far as his teachers are concerned. He must try to create a healthy educational sentiment among his people. The schools are about as good as the majority in a community want them to be. Wages are a pretty good criterion by which to measure school sentiment. Patrons too often fail to appreciate their force in making their schools a success. Apathy, not want of interest, is the cause of their seeming indifference. Revivals and weeks of prayer are necessary in the churches; they are equally potent in the school realm.

The superintendent must be frank with his teachers, brutally so, possibly, at times, yet courteous. He must visit the schools as the friend of the teachers, appreciating their perplexities, disposed to see the good rather than magnify the bad. The teachers must feel that he is in sympathy with them on general principles, that he understands their tribulations and has come to encourage and assist them. Commend judiciously, criticize politely and offer something better for what is criticized.

School centralization is a problem worthy of our interest and support. It will bear general discussion and, though the advance toward it

may be made slowly, it will come surely because in it are found many elements calculated to simplify the rural school problem and higher education for rural people, and for this we have all contended, lo! these many years.

The most serious problem that confronts the superintendent directly and his people equally forcibly is the prevention of his own stagnation. Much of his work is routine or clerical, riding his circuit in every variety of weather, away from home much of the time; the kindly meant entertainment, the nervous energy exhausted in trying to maintain a dignified composure in visiting some schools, these and others enervate physically and prevent the mental concentration necessary on the part of the student.

The social side of the educational meetings, sometimes the programme, the many good summer schools at our command, with change of thought and surroundings, are the best offsets to this tendency toward mental decline. Availing ourselves of these stimuli will at least prolong the struggle.

Superintendents are human, not infallible, and I believe always conscientious in doing what they believe to be their duty. None has the right to arrogate to himself greater sincerity of motive than the others. No two people see the same rainbow, rarely do two people see from the same standpoint exactly. Each has his own problems to solve, dependent many times on local conditions. Uprightness of purpose, labors incessant, must aid in the solution of all problems.

The following paper was then read by Co. Supt. Eli M. Rapp, of Berks county.

THE ADVANTAGES AND DISADVANTAGES OF A UNIFORM COURSE OF STUDY FOR THE RURAL SCHOOLS OF THE STATE.

The problem of arranging a uniform course of study so that the successive differentiations of the subject will accord with the unfolding powers of the mind of the child, and at the same time accord with the laws by which the various subjects in themselves unfold from the simple to the complex, from the lower to the higher, is perhaps the most difficult, as well as the most important, of all educational questions before us to-day.

To make such a course of study will tax the powers of the broadest scholarship and highest professional knowledge of our time. There are three kinds of courses of study; one, a course adapted to circumstances; by circumstances is meant the average ability of teachers. Such a course bends upward under the personal power of individuals, and bends down to the weakness of incapables. It is a course by which onward movement is possible. Another course may be called ideal, a course made under the supposition that all teachers are equal to their sacred office. It is a course not by which, but toward which, teachers may work. A third curriculum may be called a "fixed course," a course that demands fixed methods, inflexible examinations, a course that admits of no originality or originality under the penalty of disgrace.

A course of study is an organic thing, not a mechanical construction. It must bring to the growing, unfolding life for which it is intended just the material that this life needs for its highest and most perfect development at every stage of its growth. The nature of the mind of the child and the laws governing its evolution and growth are in every sense the prime factors to be considered rather than the needs of the child after graduation. The school life may in a sense be a preparation for after-life, but in a higher sense the school-life is true living at the time. The guiding principle that has controlled the formation of courses of study in the past has been at every step the needs of the child the next term in the high school, in the college, in life after he leaves school, rather than the highest needs of the child necessary for perfect growth and true living. The farmer wants his boy to learn to read and write and cipher, so as to meet the needs of the farm life. The merchants desires a wider reach of knowledge and experience, so as to enable his boy to succeed in the more extensive business activities. The purpose of education with the majority of the people has been to give the children through the schools a better chance to succeed in life. The utilitarian principle has controlled to a large extent the formation of courses of study. We will probably all agree that in the true thought of to-day the primary purpose of education is the formation of character—the increase of the powers of mind and of spirit, rather the enlargement of mental possessions.

In the formation of courses of study the subject-matter proposed for each year's work must be such as will coördinate with the needs of the child to live an ideal life and to grow rationally along lines of true development, taking into consideration at all times the life and civilization constituting the environments of the school. To make a system of education effective it must be more or less in accord with its environments. The country school should not put on metropolitan airs, but it is not in my mind that rural schools shall educate for country life only, as if to exclude their youth from the pursuits of the city, but that they shall do their share in the magnificent undertaking that seems to be the peculiar calling of our public school system, namely, to conduct its education to the end that all artificial distinctions, by which men are ranked in honor and social respectability according to the accidents of nationality, birth and vocation, may be obliterated, and men ranked according to character, and the virtues of philanthrophy and intelligent industry.

The course of instruction prepared by a committee of twelve on rural schools several years ago is probably the best outline of a course of study for rural schools ever prepared in this country. It is arranged in four groups, partly with the thought that whenever the schools of a township are gathered at one or more central points the first two may constitute the basis of work for the lower, and the last two for the higher room. The three-group system or three-department organization of rural schools by Dr. Emerson E. White, of Ohio, and the four-group system of the committee are in principle the same. Neither is copyrighted and should be adopted by all the rural schools in the State. This course is broad, elastic, flexible and sug-

gestive rather than directive. It is the aim in this course to present the most essential topics in ordinary sequence, without any prescription of methods of teaching. This course offers every facility for combination of classes, for transfers of pupils, and for any system of alternation.

Why not then have a uniform course of study for our rural schools? There are certain principles of education that apply to all school work. The great central and western states have had uniform courses for rural schools for years. One of the chief advantages claimed for the grading of rural schools is that it compels and encourages the county superintendent to live in the saddle, so to speak; to visit, inspect and supervise his schools with indefatigable industry and untiring zeal. Next to the intelligent, enthusiastic, skillful teacher the system of state and county grading with its records and diplomas will be found a most effective stimulus to arouse and foster a love for school. The system was devised to correct certain evils and to secure certain definite ends. The principal evils which it aimed to reach and correct are the following:

1. The short period of school attendance. In rural districts pupils attend through a longer period of years than in the cities, but for fewer months in a year and with frequent lapses of one or more terms. The cause of this short period of school attendance is not infrequently the actual need of the child's labor at home; but quite as often it is due to the indifference on the part of the pupil himself. The value of an education is not realized by him. The end is too remote. Some more immediate end, such as securing a diploma or certificate, is a more powerful incentive.

2. Irregularity of attendance. Experience has abundantly proved, however, that the principal cause of irregular attendance is lack of interest on the part of pupils. When deeply interested in school nothing but absolute necessity will keep them away. The uniform grading, with the system of examinations, certificates and diplomas, furnishes necessary incentive to keep pupils in school.

3. Untrained and inexperienced teachers. The small salaries paid in most rural districts compel the employment of untrained and inexperienced teachers. It is impossible for the county superintendent, owing to the extent of his district, to visit and advise with great frequency; hence reliance must be had upon some general directions. These are furnished by the course of study and the regulations that govern it.

4. Frequent change of teachers. The average term of service of the rural teacher is less than two years in some places, just time enough to undo the work of the predecessor, and not enough to establish a new regime. Hence chaos is likely to prevail without the guidance and help afforded by some uniform system of grading.

The contention of Dr. Harris and others, that the greatest need of all schools, rural and city, is a frequent reclassification in order that all pupils may at all times find their normal level, is not traversed by this paper. It is claimed that a state system of grading rural schools makes this frequent reclassification possible, while affording certain additional advantages, such as comparative standards, and more especially, stimulus, so essential to intelligent organization, profitable instruction and effective supervision. On the other hand, it is claimed that uniformity, whether of books, courses of study, or of teaching methods, is a word that should have no place in education. It is a noxious, pestiferous blight upon all educational growth. It is wasteful, unreasoning, unnatural and stupid. It treats human nature as so much dead, raw material, applying to it the methods of the paper mill or the soap factory.

We do not force the principles of uniformity into other human institutions. Who would think of requiring all hotels and boarding houses to serve the same kind of food in the same kind of dishes 365 days in the year? Who would want law or custom to prescribe that all newspapers should be of the same size and contain the same kind of articles, or that all theatres should present the same plays, or that all churches should have the same ritual, the same music, and the same sermon, or that all libraries should contain the same books, all galleries the same pictures and all parks the same fountains, shrubbery and statuary? Suppose the Almighty in building the world had followed the monotonous pattern of an ancient Egyptian pavement, and that all our mountains, rivers, lakes and seas were uniform, that our trees and flowers and birds and beasts were all alike, what a dreary, tiresome world would it be. How glad we should be to have done with it!

Then why seek to make education, the one human interest, the monotonous dead level of an Arabian desert or an Arctic ice field? Why not follow nature's grand law of diversity, and give both teacher and child the opportunity for spontaneous activity and originality? The policy that would require over 1,000,000 school children of a state to have the same readers, grammars, and histories, that would give them all the same exact measure of mathematics, literature and science, and presented to them in the same way, would simply convert the schools into a series of lifeless training machines, utterly asphyxiating to all intellectual vitality.

We do not believe that the schools should be made synchronous and identical in function by putting them into an electric circuit, manipulated at a central key-board. Rather than this we should prefer the old-time school ruled by the stern old knights of the ferule and dunce block. Better the crudest and most primitive school if it has life and individuality than the completest modern class-room, which is a mere instruction shop with its work carried on after the perfunctory manner of a post office or a custom house. A uniform state system for rural schools is no more needed than a uniform system for city schools. In so diversified a state as ours, with its mining, manufacturing and purely agricultural sections, each section can best arrange its course for itself.

It is best to have a uniform course for the county, managed and carefully supervised by the superintendent. Even the county course should not prescribe minutely the work to be done by the quarter, the month, or the week, as is the case in some counties, modeled, no doubt, after the Illinois State course. I do not believe

in prescribing an undeviating line—a straight furrow in which the teacher and pupil must walk Indian file. Neither do I believe in a system of monthly written examinations to gauge the pupil's proficiency and express it in per cents.—this is making school work entirely too mechanical.

The private schools of our country are supported by conditions that are not likely to be removed either by law or public sentiment, and the chief condition is the desire on the part of many parents to educate the child in accordance with their conception of his individual needs and for which the more flexible curriculum of the private school often offers better advantages than the rigid public school course, which makes little or no provisions for exceptions.

Our great educational naturalists have shown us that the human plant must be developed symmetrically, and under right conditions, in order to yield a wholesome fruitage of social and individual life. But here the work of the educational scientist stops. He does not show us wherein the work of the nurseryman and gardener fails to apply the knowledge of the botanist. They shrink from pointing out the unwelcome truth that some of our schools utterly fail to observe the requirements of educational science. Notwithstanding that we know that the child requires co-ordinate mental, moral and physical development, we yet at times allow our schools to go on in the old way unnaturally exploiting the child's mental nature, at the expense of his physical and moral nature. Although we know that the child's education, to have any worthy result, must consult his environment, we go on permitting and even applauding an artificial show of culture that confessedly fails to recognize environment. We give to all children alike, boys and girls, rich and poor, bright and stupid, weak and strong, sound and unsound, the same conventional allopathic treatment of lesson-learning, and so-called mental training, and altogether regardless of varying powers, inclinations, opportunities and social conditions of the individual children.

Some people are so stricken with the uniformity craze that it is likely to extend in the human form. Then let the man with the extra length of nose or breadth of mouth look out. The noses of all superintendents in a state should be of uniform length and their mouths have the same width. They must have the same sized mole on the neck, and wart on the nose. They must all part their hair in the same way and wear the same kind of clothes.

In conclusion, permit me to say that the teacher's outlook comprises two fields of observation: the remotely possible, and the immediately attainable. To aid his discernment in these two fields of views, his intellectual observatory should be equipped with two perceptive instruments: first, a long-range telescope that can bring within his view the distant ideals of education, and second, a short-focused field glass that brings out clearly each detail within the local horizon of his daily work.

Too many of our teachers are provided with but one glass, either a far-sweeping refractor that can be focused upon nothing that is not at least a generation distant, or else a little spyglass that does not penetrate farther than the "middle of next week," and that magnifies the petty things of school life far beyond their just proportions. The ideally intelligent teacher should be both far- and near-sighted; far-sighted enough to take in the glories of the distant educational promised land, and near-sighted enough to look at the simplest things of the school room from the standpoint of the smallest child in the class. But the educational cause constantly suffers both from the long-range educator who is ever peering into the clouds and who is blind as a mole to the things near at hand, and from the placid pedagogue who drowsily turns the school-room crank, knowing no greater educational problem than how to break Willie of tardiness, or how to get Katie to do her number work.

There are, and we all know it, great and profound professors of psychology and pedagogy, who have written books unfathomable in learning and so rich in philosophical subtlety as to be altogether beyond the intellectual digestion of the average teacher, but who, nevertheless, could not acceptably teach a district school. These are the impractical soarers, who are most prolific in laying the eggs of pedagogic theory, while they leave to others the work of incubation and the rearing of the brood. Opposed to these is a tribe of journeymen school-keepers, mere juvenile task-masters, who have no more interest in educational science than Kaffir cattle-raisers have in polar navigation. They have ways but no methods; they neither read, think, nor experiment; and are as devoid of intellectual and professional spirit as a collection of stuffed owls.

Fortunately for education and the race, there is a great army of earnest, striving, thoughtful teachers, who are neither rainbow-chasers nor fossils. Filled with a high-minded pride in their work and a firm purpose to do it well, they are ever on the lookout for whatever promises improvement. Lofty as their ideals may be, the glamor does not blind them to the importance of the humblest school-room duty. It is to the enterprise, the progressiveness and the sterling common sense of such teachers that true educational reform must look for substantial support. Fads may flourish and idols may be erected or demolished, the pendulum of public opinion may swing now to one side, now to the other, but in the final outcome, the thoughtful teacher and the anxious parent, both working together under a common light of ever-brightening intelligence, will, between them, work out the problem of *how* the school can best serve the welfare of the child.

Supt. Hamilton: The subject has been well presented, and the ground well covered. One practical question is whether a given course of study is an organism or a piece of patchwork—the average course is the latter. It seems like an abuse of liberty to have every little district make a so-called course for itself, rather than the county or state. County uniformity seems to work well in practice in some parts of the state; why should not state uniformity do the same?

One trouble is, that everybody thinks he can make a course of study, while the fact is it takes more ability than to write a dozen books. He would be willing to destroy all the courses we have, and let the State Superintendent or some authority prescribe us an ideal course. The difficulties are exaggerated; children of different communities, but in the same grade, will not require any serious modification of the course. About the certificate, we have heard a good deal about keeping out the incompetents "with a drawn sword," but the average teacher is not yet up to the standard of a college or normal graduate, and the "provisional" will probably be needed for some time yet, especially when teachers remain so few years in service. Here too a uniform course would help us, in saving some of the time wasted in changing teachers, and supplementing insufficient supervision in large counties. We once appointed a committee to consider the advisability of having the Department prepare and publish an ideal course, and I favored that; but it was understood Dr. Schaeffer did not approve, and the matter was dropped. The speaker believed a definite course would be an incentive to better attendance, would make the line of advance less a series of steps than an inclined plane, would give the common people a better idea of what the schools are doing, and make them more interested in their children's progress. These are some of the numerous advantages of a uniform course; the disadvantages of the present go-as-you-please practice need not be detailed. He was prepared for county uniformity and state uniformity; he wanted something like unity instead of patchwork. [Applause.]

Supt. Weiss: I believe the general sentiment favors a movement toward uniformity, and it is about time this body does something in the direction of a state course. As to the limiting of provisional certificates that is a very difficult and delicate matter for the examining officer.

Supt. Putnam: If uniformity is good on some lines, why not on others? We have, or try to have, an equal standard of examination; the Normal Schools have a uniform standard for graduation. I believe such a uniform course would be a help to teachers, giving them a definite idea of their work. I believe it would be well to have the State Department direct its operation to a certain extent, and was sorry Dr. Schaeffer, for whose judgment I have great respect, should differ on this. There is room for improvement in this line in Pennsylvania; or, if we are right, the other States which have courses must be in a bad way.

Prof. Armstrong, of Pittsburg: From the standpoint of the individual child, we do not want a uniform course. Theoretically, by pursuing a uniform course we should produce a uniform grade of manhood and womanhood; but everybody knows such is not the case. You have all noticed, too, that the higher institutions are moving in the other direction, making their options more liberal. For myself, I would prefer to settle what studies my children should pursue. But when it comes to administration, some uniformity is of course necessary—you cannot treat each pupil individually. So much uniformity is a necessary evil.

Supt. A. G. C. Smith, of Delaware county, reported from committee the following constitution for the Department:

CONSTITUTION.

ARTICLE I.—*Title.* The title of this organization shall be "The Department of County Superintendents of the Pennsylvania State Educational Association."

ARTICLE II.—*Objects.* The objects shall be: 1. The discussion of questions relating to the management of the public schools. 2. The promotion of efforts to increase the efficiency of the public schools of the state.

ARTICLE III.—*Membership.* The membership of this organization shall be composed of the County Superintendents of the several counties of this commonwealth, together with the State Superintendent of Public Instruction and the Deputy State Superintendents of Public Instruction.

ARTICLE IV.—SECTION 1.—*Officers.* The officers of this department shall be elected annually, and shall consist of a President, two Vice-Presidents, Secretary, and an Executive Committee of three.

SECTION 2.—*Duties of Officers.* The President shall preside at all meetings of the department, and shall be *ex officio* a member of all committees. One of the Vice-Presidents shall preside in the absence of the President. The Secretary shall keep an accurate record of the proceedings of each meeting of the department, including a synopsis of the discussions, and perform such other duties as may be required of him. The Executive Committee shall make all necessary arrangements for the meetings of the Department, examine and approve all bills which may be contracted and forward the same to the Secretary of the Association.

ARTICLE V.—*Meetings.* This department shall meet annually in connection with the State Educational Association at the time and place fixed by said Association. Special meetings of the Department may be held at the call of the officers of the Department when requested so to do by fifteen members of the Department.

ARTICLE VI.—*Amendments.* This constitution may be altered or amended at any regular meeting of the Department by a majority vote of the members present, one month's notice of the proposed change having been given to all members by circular.

The Constitution was unanimously adopted, and, on motion, the following members were chosen

OFFICERS FOR NEXT YEAR.

President—Supt. G. W. Moore, Chester county.

Vice-Presidents—Supts. R. B. Teitrick, Jefferson county; R. F. Hoffecker, Montgomery county.

Secretary—Supt. O. C. Gortner, Juniata county.

Executive Committee—Supts. W. H. Slotter, Bucks county; M. J. Brecht, Lancaster county; A. G. C. Smith, Delaware county.

The Department then adjourned.

COLLEGES AND ACADEMIES.

THE Conference on Colleges and Academies was announced for Thursday afternoon, at 2:30 o'clock, in the Assembly room of the Girls' Normal School, in which the regular sessions of the Association were held, but owing to the extreme heat the attendance was so small that the papers prepared for it were not read. Dr. Isaac Sharpless, President of Swarthmore College, who was Chairman of this Section, in sending them for publication, speaks of "the absence of an audience." The first paper is by Prof. Joseph French Johnson, of the University of Pennsylvania, upon the

RELATIVE ATTENDANCE AT HIGH SCHOOLS AND COLLEGES IN MASSACHUSETTS AND IN PENNSYLVANIA.

A careful study of the statistics bearing on attendance at High Schools and Colleges proves conclusively that we have two separate, and in many ways distinct, questions to discuss. Many factors enter into the question of College attendance which have no influence whatever on High School attendance. We shall therefore consider first the attendance at Colleges, using this term to include Universities, state and private, and all smaller institutions which are unmistakably above High School grade.

Our aim, after discussing the facts in regard to college attendance in the two states, is to show how college attendance is affected:

1. By Pennsylvania's custom of sending large numbers of her students to colleges in other states.

2. By the greater age and prestige of the Massachusetts colleges.

3. By Pennsylvania's geographical position, and finally

4. By climatic conditions in Pennsylvania.

In the latest report of the Commissioner of Education (1898–99) we find the following statistics bearing on the subject: Number of students pursuing higher education in Massachusetts, 11,431; in Pennsylvania, 11,531.

These figures compared with the populations of the states give the following percentages: Number of students to each 1,000 of population in Massachusetts, 4.17 per cent.; in Pennsylvania, 1.82 per cent.

In other words, Massachusetts, whose population is less than one-half as large as Pennsylvania, sends almost the same number of students to colleges and universities. If we examine the figures which sum up to these totals and carefully subtract students who are pursuing studies below what is generally admitted to be college grade, the result is not materially altered—Massachusetts is still far ahead.

These statistics, if examined by a man hostile or indifferent to Pennsylvania's fame, would prove that Pennsylvania cares but little for higher education, and that the fault lay both in her people and in her colleges. But a fair-minded man sees at once that these statistics, like most others, are misleading and inconclusive. In the first place we must remember that State lines count for little in the higher education. Each State draws more or less from neighboring sections and in return sends out more or less students to other states. But the question of "the more" or "the less" is important. Pennsylvania being a wealthy state can afford to send a large number of students to other states. Such has long been her custom. For example, she sent last year 349 men to Princeton University while New Jersey sent only 245 men to the same institution. Yet these Pennsylvanians were counted in to help swell New Jersey's percentage. In the same way Harvard, Yale and Columbia attract hundreds of Pennsylvanians. Since these men, with few exceptions, return to Pennsylvania after graduation, our state is abundantly leavened with college-bred men. Indeed Pennsylvania has never been accused even by her detractors of having ignorant or poorly trained professional men; her physicians and surgeons are above praise, the high standing of her bench and bar is acknowledged; her clergymen are well above the average in America; while in business and journalism there is a sufficient sprinkling of college-bred men. It may even be true that Massachusetts is somewhat over-educated, and that Pennsylvania uses sounder judgment in the matter of higher education. At all events, when we consider (1) the fact that so many Pennsylvanians are educated outside their own state and (2) the high reputation of our professional men, we must conclude that our citizens are fully alive to the importance of higher education and that the statistics quoted above cast no reflection whatsoever on the community at large. But do they not cast some reflection

on our colleges? The law regulating higher education should be one of reciprocity. Each state imports and exports college students. In Massachusetts the imports are enormously large and the exports small, while in Pennsylvania the exports are large and the imports small. We have already stated that Pennsylvania is all the better for exporting half-trained men to be returned polished and well-equipped with a broader experience of life than they could gain by remaining in their own state. But on the other hand a state should seek earnestly for equivalent imports. Pennsylvania imports only 16 per cent., while Massachusetts imports 47 per cent. (see rep. of Com. Ed.). It concerns us as loyal Pennsylvanians to inquire into this matter. Is the fault with our colleges or with conditions beyond our control? There seem to be at least three reasons for Pennsylvania's small imports, none of which reflect on the colleges.

1. The greater age and superior prestige of Massachusetts colleges. The choice of a college is largely a matter of sentiment, not of geographical position or indeed of comparative merit in the various colleges. Alumni create a sentiment in favor of their mother college not only in their own children, but in other boys with whom they come in contact. Now if we look back fifty years, or even a hundred, we shall find a large number of alumni of Massachusetts colleges and a relatively small number of graduates from Pennsylvania colleges. It is obvious that a college with 1000 alumni has no chance in competition with a college whose alumni number 10,000. The age of the Massachusetts colleges, with their numerous alumni, every one of whom is a kind of educational missionary, will explain to a great degree the large attendance to-day at Massachusetts colleges. It is therefore unjust to blame the colleges of Pennsylvania to-day for conditions which have been working against them the last 100 years. Massachusetts had a good start in the race for patronage, and has consequently kept well ahead.

A second reason for Pennsylvania's small percentage of college attendance is found in her geographical position. On her border line are three states of small population and great intellectual inertia where she may search in vain for any educational recruits. I refer to West Virginia whose percentage to 1,000 of population is only .68 and Delaware whose percentage is .62 and New Jersey whose percentage is 1.26. Moreover, to the south lies the barrenest educational field in the United States. On the other hand, Massachusetts is surrounded by thickly populated States where a college education has always been prized.

To be more explicit: If we can imagine Pennsylvania with her present equipment of thirty-two colleges to be transported to the geographical position of Massachusetts and surrounded by Maine, New Hampshire, Vermont, Rhode Island, Connecticut and New York, who can doubt that her college attendance would be doubled.

2. Pennsylvania is moreover handicapped by climatic conditions. If we glance over the college calendars for the last fifty years we find the Pennsylvania college year nearly a month shorter than the Massachusetts college year. This is due to the fact that our climate in June and September is such that study is almost impossible. Can we blame a Pennsylvania father for sending his son where he can have 9½ months instruction instead of 8½ per annum? Such a policy would be sound business, and Pennsylvanians seldom lack business acumen.

Of late years the University of Pennsylvania has lengthened its college year by shortening the two vacations, Christmas and Easter. This seems a wise example for Pennsylvania colleges to follow, for it is the only way to keep up with the standard set by the Massachusetts colleges where climatic conditions in June and Saptember are so much more favorable to good intellectual work.

Two other facts must be mentioned before Pennsylvania's place in higher education is rightly understood. (1) Her relative rank among the states; (2) her progress.

1. Setting aside the District of Columbia and the State of Nevada—the first because it is practically a city, and the second because the grade of its higher education is somewhat in doubt—we find Massachusetts first, Connecticut second, Maryland third, and so on till we reach Pennsylvania, which is twenty-second in the roll of states. Her rivals are such states as Indiana and Minnesota; below her are the Southern States and a few of the newly settled Western States. New York, which in all respects presents a fairer comparison with Pennsylvania than does Massachusetts, ranks thirteenth. Even after all deductions are made, Pennsylvania surely ought to stand higher; her place is beside New York or next to that state.

2. To get some data to illustrate Pennsylvania's progress, I have compared the statistics of 1898–9 with those of 1888–9. Owing to incompleteness in returns and different methods used in the two reports, I have been obliged to confine my investigation to male college students in Pennsylvania and Massachusetts. This is perhaps unfair to Pennsylvania, whose professional schools have grown very rapidly in the last decade; yet even so the showing made by Pennsylvania is very gratifying. Here are the figures:

In 1888–89 Massachussetts had 2,580, and Pennsylvania, 2,849; in 1898–99, Massachusetts 3,813, Pennsylvania, 4426. In Massachusetts the increase has been 1,233, or 48 per cent; in Pennsylvania, 1,577, or 55 per cent.

During this decade the ratio of increase in population has been about equal in the two states, each adding about one-fifth to its population. To be more exact, Pennsylvania in 1890 had a population of 5,258,014, in 1899 (rep. of Com. Ed.) a population of 6,324,000, an increase of 20 per cent. Massachusetts in 1890 had a population of 2,238,943 and in 1899 a population of 2,742,000, an increase of 19 per cent.

It is evident therefore that a comparison of college attendance during this decade is altogether fair. When we find that Pennsylvania has increased 55 per cent. and Massachusetts only 48 per cent., we realize at once that Pennsylvania is rapidly catching up to its older rival. In fact the Pennsylvania colleges show on all sides a most praiseworthy development. If Pennsylvania can keep up this rate of progress another decade we can confidently

hope that she will take her proper place among the states. Handicapped as she is by geographical position, by climatic conditions and by her traditional policy of sending her college students to other states, she has advanced by leaps and bounds in the last decade.

In the case of High School attendance only a small allowance need be made for climatic conditions or Pennsylvania's geographical position. Moreover, the percentage of High School students sent out of the state is very small. There is one difference, however, between Pennsylvania and Massachusetts that must not be overlooked. I refer to the splendid development of Pennsylvania's Normal Schools. The attendance at these is 8,370, while Massachusetts Normal Schools attract only 1,580. At first sight these figures suggest that Pennsylvania is far more practical and seeks an education that can be put to a business use. The truth, however, seems to be that in Pennsylvania the line between Normal and High School training is not so definitely marked as in Massachusetts. Many a student in Pennsylvania attends a Normal School because no well-equipped High School is within reach, not because he intends to become a teacher. Therefore in Pennsylvania a Normal School is often a rival of a High School, while in Massachusetts each kind of school has its own function, the High School to give a liberal education, the Normal School to train teachers. Evidently, therefore, a comparison between the Pennsylvania High School and the Massachusetts High School is unfair to both states. It is far better to include both High and Normal as is done by the Commissioner of Education in the report referred to above. In 1898–9 there were in Normal, High and Academic schools in Massachusetts 40,680 or 14.84 to each 1,000 of population; in Pennsylvania there were 40,624 students or 6.74 to each 1,000 in population. In another table in the same report Pennsylvania High School attendance is placed at 39,468 and her Normal School attendance at 8,370. This would sum up to 47,838. Probably the latter figure is nearer the truth and this would raise Pennsylvania's percentage from 6.74 to 7.50. Yet even this ratio is far behind that of Massachusetts, viz. 14.84. If we compare Pennsylvania with other states we find Maine, New Hampshire, Ohio, Indiana and fifteen other states surpass her. Pennsylvania stands therefore about twentieth, but is ahead of the whole southern belt. We must face the fact that Pennsylvania is far below her proper place, and there are no good reasons for it such as we found in our discussion of higher education.

Is Pennsylvania's neglect of High School training due to her commercial development? A state with such marvelous resources must develop them, and her boys are tempted into business at just the age when they should be in attendance at the High schools.

Secondly, Pennsylvania pays wretched salaries to her teachers and cannot expect to get men who will attract large numbers of boys to their schools. There are no exact data for comparing the salaries of High School teachers in the two states, but the average salaries of all teachers in Massachusetts is estimated at $713.79 and in Pennsylvania only at $590.23.

In the third place, political ideals are distinctly lower in Pennsylvania. In Massachusetts a High School training is certainly a help in political advancement. In Pennsylvania, on the other hand, a good education may be even a hindrance.

In conclusion, I would like to suggest the only remedy that occurs to me. That is to reform politics altogether. Upright, enlightened legislators would make ample appropriations, the High Schools would soon be well equipped, and salaries brought up to the Massachusetts level. Then, and not till then, will the community at large be awakened to the importance of High School education.

The second paper was prepared by Supt. W. W. Rupert, of Pottstown, upon

HIGHER EDUCATION IN PENNSYLVANIA—WHY SO LIMITED?

The diagnosis of any disease, physical, social or educational, must precede any attempt to apply remedies. In harmony with this well-established principle, we have endeavored to discover some fundamental facts respecting the influence of the high schools of our State upon higher education. To this end the following questions were sent out to superintendents of city and borough schools throughout the State:

1. How many pupils last year completed the course of study below the high school?
2. How many pupils are there now (February, 1901) in the lowest class of your high school?
3. How many years in high school course?
4. How many pupils are there now in the graduating class of your high school?
5. How many of those who graduated last year are now in college?
6. How many of those who graduated last year are now in some preparatory school preparing for college?

Twenty-two replies—representing that number of high schools, with courses of four years, in all parts of the State—were received in response to these questions. The figures thus obtained made it possible to solve, approximately, the following problems in percentage:

1. What per cent. of those who complete the grammar school course enter the high school?
2. What per cent. of those who enter the high school, graduate therefrom?
3. What per cent. of those who graduate from the high school, enter college?

To ascertain what per cent. of those completing the grammar school course enter the high school, I compared, in each of the twenty-two cases, the number in the lowest class of the high school in February, 1901, with the number graduated from the grammar schools in the preceding year. It is perfectly plain that this cannot give an absolutely accurate result; but it is also plain that the errors thus introduced are of such a character that they tend to balance one another, and the final result may, I think, be accepted as a fair approximation.

Working upon this basis, I found that, in the twenty-two districts involved in the calculation, the average percentage of those entering the high school from the grammar grades, was eighty-one. The minimum percentage was fifty; the maximum, ninety-five.

In the solution of the second problem—What

per cent. of those entering the high school graduate therefrom?—the number in the graduating class in each case was compared with the number in the lowest class. This gives, of course, only an approximately accurate result; but here, too, the errors will, I think, balance up fairly well. The calculation shows that, upon the average, forty per cent. of those entering the high school graduate from it. The minimum percentage was twenty-one; the maximum, ninety-one. Last year from these twenty-two high schools, one hundred and sixty-nine students actually entered college. Seventeen are also reported as being in preparatory schools preparing for college. Counting these seventeen as college boys from the public schools, I find that eighteen per cent. of the high school graduates enter college. The minimum percentage was zero; the maximum, thirty-eight.

It may be of interest to observe that, speaking roughly, the three percentages calculated—81, 40 and 18—form a descending geometrical series of which one half is the ratio. With the questions calling for the numerical facts that we have just been considering, I sent out questions requesting opinions upon the following matters:

1. What are the principal causes that prevent children who have completed the course below the high school from continuing their studies?

2. What are the principal causes that account for the difference between the number entering and the number graduating from the high school?

3. What are the principal causes that account for the difference between the number graduating from the high school and the number entering college?

When, in answer to these questions, several persons gives practically the same cause, the fact is generally indicated by simply giving the numeral that indicates the number of times the cause is assigned by those reporting. Occasionally identical statements are repeated because the form of statement is, in itself, interesting.

The following causes were assigned for the falling off between the grammar school and the high school: Wanted at home, 4; think they have enough education, 7; desire to earn money, 7; compelled to help support family, 3; high school course not sufficiently practical; high school course too rigid; elementary course too long; difference between high school teaching and grade teaching too great; lack of inclination, 4; lack of ability, 4; poor health; lack of thoroughness in the elements, 21; some grammar-grade teachers fail to foster a desire on the part of their pupils to go higher; "Thrift Horatio, thrift"; commercialism, of which scholarship and culture are not prime factors; hurry upon the part of many to get into the commercial maelstrom; indifference of parents; the ultra-utilitarian view of an education and the lack of optional courses open to individual needs; so many reported failures in the first year of high school, becausa of not knowing how to study.

The following causes were indicated as operating against graduation from the high school after entrance there: Wanted at home, 3; not able to keep up to class standing, 6; will not make proper effort to do the work; parents do not appreciate high school training; high school course not sufficiently practical, 2; lack of money on the part of parents, 6; elementary course too long; differences between high school teaching and grade teaching too great; lack of inclination, 5; poor health; desire to earn money, 4; desire for freedom and pleasure, 2; the necessary transition from the common to the higher branches is so great that some fail to make it, 2; lack of proper sympathy, high school teachers sometimes forgetting that their pupils are not college students, and consequently making their requirements such as to create discouragement; failure, on the part of some teachers in the grammar grades, to teach pupils how to study, 2.

The schools are responsible to a certain extent. There is too much interpretation of, reproduction of, adaptation of, what other people know, and too little education in its proper sense; too much imitative and not enough original work; too much exercise of the memory and not enough development of the perceptive side; too much absorption and too little training; arrested development; enter normal schools before graduating from high school; too rigid application of the "survival of the fittest"; only fifty per cent. of the pupils possess the requisite brain machinery for an academic course of four years.

The following causes are adduced to account for the loss between the high school and college: Want of means, 10; the desire to enter business or make a special preparation for it; lack of inclination to go college, 4; lack of intellectual ability to go to college, 2; poor health; home influence favoring higher education is wanting, 4; the ambitious boy wants to do something and four years is a long time to wait; the desire for a short cut to the earning of money, 2; "Thrift, Horatio, thrift"; the colleges are responsible to the extent to which too great stress is laid upon linguistic qualifications, and too little upon the development of the perceptive side, and any education that does not involve executive ability as a dominant factor is one-sided, and will fail to meet the requirements of this aggressive and practical age; a college education is not desirable for all at the present stage of human evolution; prevailing idea that a high school education is ample for a girl; the high school is the end of the common school system, and by many is deemed sufficient to furnish the education necessary for general success in life, 2; the many opportunities for service open to high school graduates, as clerks, teachers, etc; our high school course, as complete as the college of forty years ago, gives immediate access to professional schools.

Such are the opinions and convictions of twenty-two educators in our State. They are all men of experience and are deeply interested in all educational problems. Without reserve, they have expressed themselves upon the questions propounded. All parts of the State—north, south, east, and west—are represented. There is, evidently, an abundance of material here for thought and discussion.

Just a word or two respecting remedies. Some of the forces adverse to higher education in our State, and indicated in this paper, are beyond the reach of remedial agencies of any kind whatsoever. In this list must be included poverty, lack of ability, and poor health. Others of these adverse forces, such as lack of appreciation upon the part of the parents of high school

training, can be reversed and brought into harmony with educational forces only after long-continued, enthusiastic, tactful effort. In other cases, assuming of course that the diagnosis is correct, the remedies are simple, easily applied, and the cure immediate. If the high school course is not practical enough, make it more practical. If it is too rigid, give it less rigidity. If the difference between high school teaching and grade teaching is too great, make this difference less.

Finally, permit me to say that if the attendance in the high schools and colleges of our State is smaller than it should be, it is much greater than it was a few years ago. There is no cause for discouragement. Time, wisdom, patience, work! these are the elements that must be harmoniously blended if we are to reach a successful solution of the problem under discussion.

CHILD STUDY.

THE Department of Child Study met in the Boys' High School, on Wednesday afternoon, at 2 o'clock. The president, Dr. Henry H. Goddard, of West Chester Normal, called the meeting to order, and expressed his regret at the necessary absence of Drs. Maltby and Noss. We are indebted to Professor Deatrick, the secretary, for the following report:

Dr. D. J. Waller, Jr., of Indiana Normal School, read the first paper, on "Child Study the Need of the Hour":

THE NEED OF THE HOUR.

Eight years ago paidology as a word and as a science was unknown. To-day monthlies exclusively devoted to it are sustained and libraries upon the subject have been written. Educators were content to accept the old saw—that the child was the father of the man—but we have learned that like many other half-truths this old maxim has been a most expensive deception. The child was regarded as simply a sawed-off man. The characteristics of the one belonged to the other and pedagogy has been a corollary of psychology. One of the latest and greatest discoveries of the nineteenth century was that the child is for all practical and scientific purposes a distinct entity requiring specific observation. We have hitherto assumed with regard to the child what men assumed up to the time of Watt regarding steam and up to the time of Franklin regarding electricity—that it is so common and widely known that further investigation must be fruitless. But the application of scientific methods to steam and electricity have revolutionized the world and when the same method shall have been applied to the child and the results have become apparent we shall look upon these two old assumptions regarding the child as monuments of stupidity. That the child, the chief object of educational effort, should so long have been neglected by the boasting champions of modern scientific method will be one of the marvels of the history of education. That we need child study is almost self-evident. This is a simple proposition, as Breitmann tells us all great ideas should be.

First.—Science proclaims it. It is natural that men schooled in laboratories should scorn the claim that education is a science. Instead of having scientific inductions for its basis and being thereby able to give prompt and exact replies to such questions as this: Is the right-handedness of children a normal or an abnormal condition? or this: Do boys of all ages possess greater endurance than girls of the same age? or this: To what extent may dull and troublesome pupils be improved by a careful adaptation of their education to their physical peculiarities? to these education can offer only guesses and conjectures. The system thus far has been either deductive or empirical in its methods. It has proceeded upon inferences from what is known as to the minds and bodies of men and women or it has arrived at rules and principles by a consensus of opinion derived from practice. There has not been a close systematic effort to gather by induction from tens of thousands of instances the exact truth—the law of the physical and mental development of the child. There is no reason why the effort should not be made and there is no reason why the results in this domain should not be revolutionary as they have been in those of astronomy or surgery. Since the physical nature of a child is as much an object for investigation as is any other in the material universe and since even mental and temperamental characteristics may to some extent at least be subjected to modern scientific method we cannot expect that education will be ranked as a science until Child Study shall have been pursued in earnest.

Second.—Experiment shows it. Chicago is the first great city that has attempted the work. Among the physical facts discovered have been the following: An examination of forty-seven hundred children showed that thirty-five per cent. were defective in eyesight; that the number of eye and ear defects increases during the first years of school life more rapidly than at a later period; that defects of sight and hearing are more numerous among the dull and backward pupils than among the others. Dr. Christopher, chairman of the committee of the board of education, after a year of scientific child study finds also among other facts that there is a distinct relation between the physical condition and the intellectual capacity of children; that the endurance of boys is greater than that of girls at all ages; that the great extremes in the physical condition of children in the upper grammar grades makes it desirable to introduce great elasticity into the work of those grades; that unidexterity or right-handedness is a normal condition and that there is a direc-relation between the degree of right-handedt ness in the intellectual progress of the pupil. At any given age of school life bright pupils tend toward accentuated right-handedness and dull or backward pupils tend toward ambidexterity. Training in ambidexterity is therefore contrary to a law of child life; that there are certain parts of the school day when pupils have a higher storage of energy than at other periods.

If the application of modern scientific method

to the children of a single city for a single year yielded the group of facts from which the above have been selected, who shall say that experiment does not show the need of child study?

Third.—Economy demands it. Dr. Christopher reminds us that as a matter of fact it is not known at all whether it is better for the first grade pupils to attend a half-day session or a whole-day session nor is the relative value of the morning and afternoon sessions known. Let us assume, says he, for the sake of the argument, that half-day sessions are found preferable for young children and that afternoon sessions are as good as morning sessions. Such knowledge would save the board of education of Chicago enough money in a single year to support for half a century the corps making the observations. Think for a moment of the waste of energy and of the suffering on the part of defective pupils in their efforts to keep up with their normal classmates—efforts which in many instances are unnecessary because the defects are removable. Then think of the fearful waste of energy upon the part of the teachers of such pupils—ignorant of the seat of the difficulty the faithful teachers either worry over their own apparent want of skill—and worry wears worse than work—or misunderstanding the pupils may misjudge them, their animosities are aroused and the life of the teachers is cut away as by a file. In a Chicago school of twenty dull and troublesome pupils sixty per cent. were defective in hearing and twenty-five per cent. in sight. Most were defective in more than one respect. Economy of effort by pupils and by teachers was in this instance obviously secured by child study. Multiply this by one-twentieth of the defective children in the United States, remembering that thirty-five per cent. are defective in sight and the call of economy will make itself heard in every school board. The scientific, philanthropic and economic considerations are such that hope, faith and charity are all aroused in behalf of child study.

But caution is needed. Twelve year old pupils in the fourth grade were much taller than twelve year old pupils in the fifth grade in Chicago. The explanation is found in the fact that there were but nineteen in the fourth grade and forty-two in the fifth. Inductions to be of value must, as a rule, be gathered from a great number of individuals. Conclusions given out that have been based upon the examination of a small number of children, or in other words hasty inductions, will do the cause of truth great harm. Another caution to be observed is not to place great reliance upon answers made by children as to their preferences and feelings. The writer in passing a group of children overheard their remarks upon answers to such questions and observed their amusement at the gullibility of a teacher who would expect them to reveal such secrets. The natural secretiveness of children resents such attempted intrusion upon their privacy. Only by the exercise of rare tact can reliable information upon such topics be obtained.

Yet let not these considerations discourage any. The cause is a noble one and can only be advanced rapidly by the coöperation of a multitude of workers. Though we have not the tact or the patience of the born scientist yet careful observation systematically made will reveal its measure of the needed truth and though we should never become paidologists we may console ourselves with the knowledge that the real facts of astrology were highly valuable to the astronomer and those of alchemy were highly valuable to the chemist, so those of an ambitious and even an outgrown pedagogy may be to the paidologist.

The paper was discussed by Dr. Geo. M. Philips of West Chester, Prof. W. W. Deatrick, of Kutztown, Miss Susan Lodge, of Philadelphia, and Prof. E. L. Kemp, of East Stroudsburg, on the point relating to teaching left-handed pupils to use their right hand. Drs. Brandt and Buckwalter spoke of the gain secured by half-day sessions for elementary pupils.

SPELLING.

Supervising Principal B. C. Gregory, of Trenton, N. J., read a paper on "The Rationale of Spelling," which has been published in full in the *Proceedings* of the New Jersey Association for Child Study, January, 1900. Its conclusions are based upon an investigation conducted in the fifth and seventh grades of his schools. He finds that the law indicated is that sound is the dominant element in children's spelling, and that spelling can not be taught by writing alone. While the psychology of the written method is incontestable, hard oral drill is suggested by the predominance of ear-mindedness. He notes the contempt for unnecessary letters, and commends the Pollard phonetic method as exhaustive and scientific. He finds little value in phonetic alphabets and double-printed books. Errors arising from visual aberrations are also considered. The influence of foreign birth or parentage is estimated. Errors do not always imply lack of knowledge; they often arise from haste or domination of an associated idea; the child should be permitted to discover these for himself. Criticism of spelling should be analytical; more oral work is needed; we should remember that the pupil is to be trained to write correctly not in columns, but in paragraphs. When we extirpate errors in familiar words—in the child's own vocabulary—we have largely cleared up bad spelling. The child should find and correct most of his own errors, without help from the teacher; the right to help themselves is a serious moral consideration. Froebel claims there is no true education unless the child is made con-

scious of power. Instead of emphasizing success, power, we too often emphasize failure. This is a mistake. By recognizing ability to correct his own errors, we emphasize power; by holding up a long list of errors we emphasize failure. Give the child a chance; if you must use a blue pencil, mark the words written correctly.

The paper was discussed by Prof. Cornman and Miss Lelia E. Patridge.

Dr. Francis Burke Brandt, of the Central High School, Philadelphia, read the last paper, on

CHILD STUDY AND ARRESTED DEVELOPMENT.

The ethical end of which democratic society is conscious in the twentieth century as its true function is the extension of social equality among men. The progress of human society has been a steady march towards the freedom of the individual, and towards the more perfect realization of the conditions of freedom. Free birth, free contract, free suffrage, free worship, free instruction—these are the goals towards which centuries of social evolution have led the human race. The institutional witnesses to this progress towards the perfection of personality are the family, industrial society, the state, the church and the school. These institutions, imperfect as they yet are in their development, are institutions of individual freedom. Through them the individual receives his racial inheritance, through them his emancipation is made possible and complete. To-day we appreciate the meaning of social equality as never before. It means the abolition of slavery and snobbery; the extension of intelligence, sympathy and character; the prevention of poverty; the rule of the ruled; and direct responsibility to duty and the divine. In a word the fullest freedom can come to the individual only through biologic, economic, political, religious and educational emancipation.

In the promotion of social equality among men the school has a part to play which society has not yet fully appreciated. No other institution of society and of civilization can take the place of the school, nor is the school a substitute for the other institutions of civilization. It is a coordinate institution with a function determined by the end of society as a whole, but at the same time specifically its own. The inevitable narrowness of home education, the blindness and impotence of self-culture; the one-sidedness and dwarfing character of industrial training, the militarism of state education, the enslaving formalism of religious instruction, have led in the process of social evolution, to the development of education as an instituted school process whose characteristic is that it is at once fraternalizing, rationalizing, many-sided, equalizing and liberalizing. The fullest individual emancipation demands complete intellectual emancipation. It is intellectual emancipation which secures to the individual the highest personal freedom.

In the light of these principles, I wish to point out, what. it seems to me, should be the attitude of child study towards the problem of arrested development. This problem, in the opinion of so eminent an educator as Dr. Wm. T. Harris, is one in which child study will find, perhaps, its most profitable field of investigation. "If it can tell the teacher," he declares, "how far to push thoroughness toward the borders of mechanical perfection, and where to stop just before induration and arrest set in, it will reform all our methods of teaching." And it can and will do this. The new psychology in its two phases of physiological study of brain and nerves, and its observation of child development, will show us how to realize by education the ideals of the highest civilization. "The prolonged infancy of man," he concludes, "will be in less danger of curtailment through vicious school methods." *

I am convinced that child study will make a mistake if it believes that its problem is wholly one of the examination and elimination of alleged vicious school methods. It is perhaps necessary to warn against over-drill in mechanical habits of memorizing or calculating; in over-cultivation of sense perception in tender years; against induration in mechanical methods of thinking. It is undoubtedly true that the absorption of the gaze upon adjustments within the machine prevents us from seeing the machine as a whole; that attention to details of coloring and drawing may prevent one from seeing the significance of the great work of art; that the habit of parsing every sentence that one sees may prevent one from enjoying a sonnet of Wordsworth; that too much counting and calculating may, at a tender age, set the mind in mechanical habits of looking for mere numerical relations in whatever it sees. It is further true that the real heart of the question is, where to stop and change to other and higher branches, in time to preserve the full momentum of progress that the child has made. But the facts are that the child stops, but does not turn to higher branches.

Mr. Herbert Spencer and others may sigh for the happy day "when the minds of children are no longer stunted and deformed by the mechanical lessons of stupid teachers," but shall the school and teachers be held responsible for the arrested development of the minds of children who never come to them? In 1899 the grand total of pupils registered in the schools of the United States was 16,738,362. This included pupils in both public and private schools, and in all the grades, elementary, secondary and higher. Of this number 15,856,370 were enrolled in elementary schools, 655,227 in secondary schools, and 226,765 in all phases of higher education. In a word 94.73 per cent. of the school population was in elementary schools, 3.91 per cent. in secondary schools, and 1.35 per cent. in schools of collegiate rank or higher. These are fundamental facts which set in bold relief the halted structure of the school. Children plainly stop in their education but not to turn to higher branches. So far as secondary and higher schools are concerned, little opportunity is furnished them to practice their "vicious methods" upon the masses of the people.

It is then in the elementary school that the vicious methods are practiced which are leading to arrested growth in American life, and tend-

* *Psychological Foundations of Education*, p. 143.

ing to halt the educational emancipation of the individual? I do not believe so. We may not put the whole burden on the common school and its methods.

I am convinced, therefore, that child study will make a mistake here too, if it believes that the whole of its problem is the psychological study of the mental processes of the individual child with a view to the elimination of defective methods of teaching.

Child study must lay greater emphasis on the sociological side of its problem. The mental growth and development of our boys and girls, I believe, is in danger of curtailment not half so much through vicious school methods as it is through vicious social conditions. Boys and girls who are set adrift on the sea of complex modern life at thirteen and fourteen years of age equipped only with an elementary school education, can never hope to be peers of their more fortunate fellow-countrymen, can never be expected to be aught but souls arrested in development, petrified personalities. In whatsoever other respects they may be equal to their fellowmen, at this diverging point social inequality begins. If inequality already existed, withdrawal from school only intensifies it. Liberty, fraternity and equality will remain empty words until the day the school functions fully in the life of every normal individual. The reason why the pupils from elementary schools do not go on is not entirely due to defective methods and lack of stimulation and inspiration in their teaching. On the family, industrial society, the state and the church, as I have already pointed out to this association, rests the real responsibility for the greater part of the sacrifice of child life which American life reveals.

If child-study will lay bare, and set in a strong light the *social* conditions which are conducing and contributing to wholesale arrest of development of the minds of American boys and girls, it will make here its greatest contribution to the cause of education.

After the close of the discussion, a brief business meeting was held, at which the present officers of the Department were re-elected to serve until the next meeting of the Association.

PRIMARY SCHOOLS.

THE Conference on Primary Schools was held on Thursday afternoon in the building of the Commercial High School for Girls, with Miss Mary Mickey, of Steelton, presiding. Miss Ella Ryan, Principal of Primary School, Harrisburg, read the following paper:

THE CHILD'S FIRST SIX MONTHS IN LEARNING TO READ.

In the making of ax-handles two important questions arise: How may we select the right kind of timber? and How shall we form the handle? These questions have their exact analogues in connection with the making of books and methods.

Of the making of ax-handles there is an abundance; but, be the edge of the ax ever so keen, the handle of timber and fibre ever so well adapted for its use, the fashioning ever so skillful, the motive power that swings it is that which splits into parts the object toward which its force is directed. "Of the making of books there is no end"; but, be the plan ever so harmonious with the interests of children, the gradation ever so careful, the order of development pedagogically wise, it is the richness of personality in the teacher that will help pupils toward an increase in knowledge which will deepen their sense of the vast world of the unknown, and awaken them to a vibrant appreciation of it.

When the child enters school he has in his vocabulary several hundred words which he uses intelligently, or with the meaning of which he is familiar, because he hears others use them. These words are sounds recognized through the ear. The teacher's task is to lead them to know with their eyes the symbols of their thoughts. How will she do it? *The* method of teaching any subject has not yet been discovered, and it never will be. Progress will always mean modification or change. A good method, however, be it particular or eclectic, bases instruction upon some idea already existing in the child's mind. There must be a bond of similarity or there will be no union.

The lines of interest and natural activities are the lines of least resistance; hence, there should be a careful transition from the home life of the child to that of the school. In the words of one to whom teaching is a joy, "Where is the primary teacher who can reduce to writing the warmth, the color and the inspiration which must give birth and life to any forms employed with a class of beginners?

Here is where the teacher filled with "the spirit that giveth life" reaches out to the little one while, unconsciously, he follows where she leads. Why? Because, in directing his glance toward the visible forms of his mother tongue, she has a clear vision of the end toward which the *mastery* of those forms moves; so she directs him with no uncertain vacillating step. We do not plant a tree in soil which is not legitimately involved in its growth and development, neither do we plant it near an object which will endanger its own preservation. So the teacher with knowledge, skill and tact, but, above all and in all, with *heart power*, turns toward the child, and begins with steady gait, for she knows the end toward which her first lesson logically directs itself.

In other words, she realizes in an intense degree that the first lessons in reading are not the demonstration of any fanciful scheme, not isolated word-getting, but word mastery which will be felt all the way up through the grades, so that, when he reads in the Grammar Grade, his thought-getting will not be crippled and mistakes will not be condoned because of imperfect work in word mastery in the Primary Grade where the mechanical process belongs.

The teacher becomes acquainted with her pupils by talking to them and learning what they know, what they feel, and how they think; the districts in which they live; the birds and animals they like; toys which to some of them are almost companions; Nature, which lies not

simply about them, but so near them—these are guide-lines which occasion and develop thought, and stimulate natural expression; even the songs which the little ones sing, or those which they learn most readily, are a key to their natures, or to the character of their environment.

Now what a teacher may do in the suburbs of an inland town, another would not be justified in trying to accomplish in the midst of entirely different forces in a city on the bank of a mighty stream, or the shore of an arm of the sea; even that which would be a revelation of wonder in the Thirteenth Ward of the metropolis may be commonplace in the Thirty-Seventh.

Children of a larger growth understand more fully that which lies within their own experience. Why should there be any attempt to cultivate unrelated thinking in children not "grown tall"? Whether it be the throbbing heart of a commercial center, near the endless buzz of loom and spindle, the edge of a conservative town, or where you can hear the great, tall trees singing their mystic, solemn songs of the ages to the tender hearts of brooding mothers and wee babies cradled in their breasts—that which lieth nearest will be the "open sesame" to unlock a treasure trove from the recesses of which there will be judicious selections of material for the future.

Gradually the teacher, making use of her knowledge of the phase of life represented in the child, adds to his knowledge, emphazing his common but useful experiences, but giving to him ample opportunity for broadening them and acquiring new ones.

Through object, story and song he gets knowledge; through drawing, simple work in construction and imitation with the voice he gives his knowledge expression. Whether these lessons develop in the child (1) the *power* to acquire and (2) the acquisition of *thought* depend on the knowledge and teaching quality of the teacher. The mental life of the child is receiving nutriment, and he sees on the blackboard the symbol of what he thinks. He learns to pronounce what he *sees* as well as what he *hears*.

Thus far he has been getting experience that results to a certain extent in recognition of form, increase in vocabulary, and correct oral expression. In the lessons that follow—thought-getting through thought-symbols—two phases of work present themselves. The first is the mechanical which is the means or process through which the second phase, which is intellectual, is reached. It follows that, in order to get the thought from the printed text, there must be not only rapidity but independence in word-getting.

From babyhood the child gets his language by hearing and association. He has no power to recall a word except by association, physical or objective. Now, what is true of language acquirement before he enters school will be true of word acquirement in the first stages of the work in reading; but the memory will not be able to keep pace with the demands made upon it in the mastery of a number of new words every day. He needs a key that will make him dependent upon himself in that mastery of every new word which, if not recognized at once, becomes an obstacle to his thought-getting. This key is found in phonics and word-building.

What must or may be accomplished in the first six months? Habits which will assist or cripple will be formed in this period. Just here the teacher is confronted with the question: Are we too much interested in the *how* and not sufficiently in the *what?* What will give "the greatest good to the greatest number"?

Teaching phonics and word-building presupposes a method, but it is possible that there is stress laid on the form of the method rather than on its function. Every method worthy of the name has its virtues, every system its educational value, but though either be a veritable arc light, a careless, narrow-souled teacher will defeat its purpose; instead of turning it so that it may make light in a dark place, she stands between it and the pupil, leaving him in the shadow.

The work of the first six months is not so much reading as it is getting ready to read. Why is it that there is so much pronunciation, and that imperfect, instead of reading in the upper Grammar Grades? It is because we do not *bear down hard on the getting ready;* neither word-pronouncing nor word-functioning—each a single but essential element in reading—has any excuse for its existence except as it stands as an assistance in that which is the dominant thought of the entire work—the mastery of books.

Work in phonics has a purpose which is twofold: 1. To give the child an independent power of associating certain sounds with certain forms, so as to make him independent in recognizing new words; and 2. Vocal culture, in the sense of clear enunciation and good pronunciation, with such knowledge of marking as will enable him to sound words now and use the dictionary intelligently a little later in his school life. The danger line is easily reached by making everything else subordinate to phonics, instead of making phonics incidental to reading. The only stress on phonics and marking admissible is such as will intensify the interest in the main thing—reading. Otherwise, they become a hobby instead of a means to an end.

Concerning thought-getting: Is it not possible that we sometimes ring the changes on thought be-getting that is not getting related thought? We wish the child to have a clear picture of that which is being taught and yet the picture, although perfectly clear to him, may be wholly incorrect. It is absolutely necessary that the first lesson be taught so thoroughly that it will be impossible for the average child to forget it. The first sight-word in a list of sight-words should be so impressed that the child will know it on blackboard, chart or card; the second follows with review of the first; the third and suceeeding ones afterward, with reviews drilled and drills reviewed. Drill does not mean repetition only, for that simply "intensifies processes," and may not make an intense impression.

The same principle applies to phonetic analysis. The letter *m* is placed on the board. The child is taught the sound of which it is the symbol; it is sounded, erased and written again and again; is placed now here now there; it is

hidden; it is shown; the child is kept on the verge of expectancy; his knowledge is challenged, but his intelligence is honored. Another symbol, another sound; a sight-word follows; then more sounds. With them are included articulation and ear-training; but the drill must be rapid, the leading sure, the lessons short, frequent, and every step in the truth to be revealed, given *when he is ready for it*, but in a fashion which arouses his curiosity. In the unexpected lies a charm toward which the minds and hearts of children always turn, and the ability of the teacher to make that unexpected interesting is a test of her teaching quality, and her recognition of the elements of strength as she finds them, applied to pupils as she finds them.

Concerning the blackboard: The time spent in placing on the board lists of carefully written words which may remain too long, might be more profitably spent in drilling upon them. It is possible for a child to see a word or form of expression and not be able to associate it with something else. He has not a concept; he has a remembered percept. He must be led from within out. The method by which the teacher reaches him is the "visible machinery" by which the powers of his mind are awakened and strengthened. Something which he must work out is set before him. It is the working out which leaves the impress. In sight-reading, in word-building, in phonetic analysis, in any daily adjunct to the reading, the working-out makes him self-helpful. The earlier the development in him of self-directive power, the earlier and more accurate in proportion will be his desire to give that power expression.

A child is an intense student; as soon as he realizes his power, the willing spirit of his inner life reaches toward the world outside. What is it that stirs him. The method? That is only a means to an end. The work? Only inasmuch as it is involved in the cause. What is the cause? *The teacher.* She rapidly, unceasingly and enthusiastically challenges his best effort, for only his best is worthy. But she does not do all for him; she aids him in every possible way good for him, but leaves for him to do alone all the work of which he is capable.

Economy of time and effort forbids drill on words which will soon be dropped or forgotten, word drills look steadily towards the first lessons which he will find on the printed page. In every lesson, however—in syllable elements, in type words, in stories or in sentences containing any of these—it is not only that these are remembered, and words have been built that will make the work effective, but that every step in the learning has assisted without the shadow of a doubt in making the next learnable. The natural sequence is not simply a mechanical increase in number of words, but the generation, gradually but surely, of the increase in power to see relations, and make or build other words.

The Word and the Sentence: If the child has been drilled in word mastery, does it follow that he will stumble in giving expression to a thought in sentence form? Not necessarily. On the contrary, if he is taught symbols as they should be taught, if he understands the sign, he will have less trouble with the thing signified. If he stumbles it is because his thought is interrupted. What causes the interruption? Either he does not know the word, or the *function* of the word in the sentence is outside his experience. A word or the expression of a thought is easy or difficult to a child in proportion to the distance between either and his understanding.

Coördination: Conditions as we find them in the school-room largely determine the application of methods of instruction, and the order in which topics are adapted to the growth of a pupil's capacity. In the words of the Committee of Fifteen, "The branches to be studied and the extent to which they are studied will be determined mainly by the demands of one's civilization." Now, much of the first six months in reading has much of the mechanical process in it; it is true he has been taught to write, to draw and to express orally; he has learned something of color and form, and of plant life; but principally he has been taught through the medium of conversation and good story-telling. When his reading vocabulary is sufficiently large, and he begins to read the printed form, what does he do? Read to get information? No. To acquire knowledge? No. He is giving expression to knowledge already acquired; in short, simple sentences he is establishing the truth of that knowledge. The manner in which he does this depends much upon the breadth of the *teaching* and is one of the elements in deciding when a child is ready for the book.

It is possible that in attempting to teach too much at once, stress will be laid on the material and texture of the lessons, instead of on the vital thing—*learning to read.* A reading class and a class of readers are two different things. The child in the first six months, and for some time beyond that, is in the reading class. It is not important that he understand "the music of the spheres" now, but it is important that he be given the power to understand it in the future when he reads it.

Says Dooley to Hinnissy, "What China needs is a Chinese exclusion act." The quaint philosophy of the Inn Keeper of Archey Road finds an echo in the heart of the intense teacher. What enthusiasm in teaching reading in Primary Grades needs is an exclusion of what is sometimes included under the head of activity awakening, but which is practically pernicious activity.

The aim, the end of the six months, has been seen from the beginning. The teacher has not tried to teach a certain number of words, but, through the method as a medium, has assisted in the awakening of the power that will make it easier for other persons and other things to teach him. In other words, the teacher has made the child *teachable.* The influence or power like "the widening wave from the cast-in pebble," will be felt in the next six months of his first year, and, strengthened at every step, will reach throughout the grades. It has been said that schools differ from one another, "as one star differeth from another in glory." The schools make light. The teacher makes the difference in the glory of the light.

The others who were appointed to read papers being absent, a motion was carried that this paper and the next subject, "Ex-

pression in Primary Reading," be opened for general discussion. The discussion was opened by Miss Lelia E. Patridge, of Philadelphia. She said: While there are many things in the paper to which I want to say "Amen!" there are some ideas advanced with which I do not fully agree. In the three or four years preceding his school life the child has been constantly giving expression to his thoughts. His mother has never had to suggest to him that he should use the rising inflection in asking questions, or that he should emphasize important words; he does this unconsciously. His enunciation may be faulty and he may need drill to overcome this, but if he gets the thought as he reads, inflection and emphasis will take care of themselves. We all know of children that have learned to read before starting to school, without any special effort being made to teach them. They have not been drilled in phonics; no one knows by just what process they have learned, but the art of reading was acquired with wonderful celerity because they wanted to learn. It is possible that we try to teach children to read too soon. If we waited until they wanted to learn, the time of learning might be greatly shortened. Phonic drill is valuable because it gives the child power to recognize new words, but it should not be made a part of the reading lesson. When the child reads, his lesson should contain no words that are not already in his vocabulary, and he should read the whole sentence. The process of translating his oral language into written language is hard enough without placing unnecessary obstacles before him. Do not bother him with analysis, let his whole attention be turned to getting the thought. The more practice he has the better, for "children learn to read by reading."

A teacher asked whether the child learns to talk in sentences, or whether he begins with words. Miss Patridge replied that a few children talk in sentences from the first, but that usually they begin with words. This may be partly because the parent so often talks to the child in words, instead of complete sentences.

Miss Elizabeth Lloyd, of Lansdowne, Pa.: In the course of my experience I have taught reading by several different methods, and am convinced that a thorough drill in phonics, either by the Pollard or some other well-planned system, greatly expedites the process, and makes the child more self-helpful afterwards.

Miss Annie C. Scarborough, of Bucks: A skillful teacher will adapt her method to the class. I have used the Pollard system with one class with excellent results, but with another class was obliged to give it up and try some other way.

Miss Patridge: The teacher must have a clear plan in her mind of the method she means to use and the results she wishes to attain. She should understand the laws of the mind and the necessity for making the associations clear and strong. When the child begins to interpret written or printed words he should recognize them as old friends in a new dress. Even the second reader should contain no words that are not in the vocabulary of the average child. The place to enlarge vocabulary and to teach the child to recognize new words it seems to me, is in the language class.

Supt. McGinnes: Many teachers have not a high ideal of expression in reading; if the children call the words fluently they are satisfied. Many children do not talk well because they have not good models before them at home. In visiting the Quincy schools I noticed two correlated facts: the children read with wonderful beauty of expression, and there was great play of emotion in the language work.

The conference then adjourned to the hall in which the department of Nature Study was in session.

HIGH SCHOOLS.

THE High School Conference assembled at the High School for Boys, at Broad and Green Streets, on Thursday afternoon, in charge of Prof. A. D. Eisenhower, of Norristown.

The first paper was on "The High School Course of Study: Uniform? Elective Courses? or Elective Studies," by Prof. Walter L. Philips, of West Chester, as follows:

THE HIGH SCHOOL COURSE—UNIFORM? ELECTIVE COURSES? OR ELECTIVE STUDIES?

It has been but little more than one hundred years since the permanency of democratic institutions was established. Before that time democracy was a chimera and friends of aristocratic institutions had nothing to fear. The French Revolution shook the foundations of aristocracy; the Southern Confederacy failed

utterly; Maximilian of Mexico was defeated and Louis Napoleon's government collapsed. Admirers of aristocratic institutions now shook their heads and admitted that republics have stability. Americans indulge in the opinion that failure of civilization will never come as long as democracy stands. The conditions of our republic being altogether democratic, we need a democratic education which shall neither recognize class distinctions nor neglect to educate the individual.

The rapid growth of this modern form of government emphasizes the fact that a republic needs independent men, trained as individuals, in schools where there are diversities of opportunities for those who are ambitious. Here all are born free and equal; there are no galley slaves chained to obey an aristocracy, but every man is great according to the use he makes of the opportunities presented during his period of preparation.

The chief aim in a student's life is not the mere acquisition of knowledge. The psychologist contends that the emotions and the will shall receive attention as well as the intellect. Growth in morals has not been commensurate with growth in knowledge. The doors of the University are, in many instances, closed to the boy whose mathematics or language may be deficient but whose principles of conduct are the best, while they are open to the one whose mathematics are good but whose will power will not forbid indulgence in the so-called lesser vices. Development of character should take precedence over all other aims in the formation of a curriculum; following this the interests of the great majority of students must govern. The existing conditions of the country and the requirements of the age should also be determining factors. High Schools are not supported entirely for those who enter professional life or who become matriculants at a college or university. The 95 per cent. of the students should be considered with the 5 per cent. Germany supports her gymnasia with the idea of matriculating their graduates at the university, but the German method will not do in America.

If the relative values of the different branches of study are to be governing forces in the formation of a curriculum, it will be a difficult matter to tell which study is worth most. To one class of students, the so-called utilitarian studies will claim first place; to another class, the culture studies will be most attractive. The followers of Herbert Spencer, who has waged a victorious struggle for a modern programme, admit that Latin and Greek cannot maintain their supremacy in American institutions. In Matthew Arnold's plan the refinements of literature hold supremacy. One greater than either of these, who knows all things, and whom we all delight in following, said "Man does not live by bread alone."

The problems of life force themselves upon boys and girls of High School age and our courses of study should help them to meet the issues and solve them. Every one must be trained to do his duty to himself, his state, and his Creator.

Supplementary to a comprehensive course of study is the influence of the teacher. No course, uniform or elective, can do so much towards the formation of character as a strong man or woman can do. If there is a teacher in this audience who is not interested in the mental, physical, and spiritual growth of his students; if there is one who is not able to render most of service where most service is due; if there is one who cannot by complete self-control keep himself on a high plane of morality and scholarship, then is he incapable of rendering that service to boys and girls which is demanded of him in the secondary schools where, above all other schools, character is formed.

The first part of my subject is, Should the High School course be Uniform? The most pvominent educational writer I have read on Uniformity is Prof. Hugo Munsterburg, of Harrard. His article in the *Atlantic Monthly* for May, 1900, is a most helpful inspiration to a thorough preparation for work. The objection to his article on Uniformity is that he upholds a system not suited to American students.

Being a German of the highest type of scholarship, he bases his arguments on the success of the German gymnasia, secondary schools of entirely different types from the American High School. They take the child at the age of nine or ten, much below our High School age, and give him a training which will fit him for a learned or a technical profession. After entrance, there is no turning aside from the prescribed course. The differentiation is made before the child enters the school. He has no opportunities to disclose his capacities for any particular career. The parents fix the goal and it is the function of the school to place a certain stamp upon the child and aid him in reaching that which will satisfy the ambition of his parents.

There the government is hereditary. A titled aristocracy and privileged classes are found there. The many are born to obey, the few to rule. The highest civic virtue is obedience. The central ministry have drawn the lines of uniformity so hard that there is little chance for election on the part of the individual. Considering the plan of government there is nothing incongruous in such a system.

T. E. Bolton is authority for the statement that even in Germany there is not entire satisfaction with the system of uniformity, that it is distinctly a class system and that Germany is breaking the fetters and getting farther away from it as time advances. There class distinctions and boundary lines can be passed only with great difficulty. They mark every step of the student's progress from the time he enters the secondary school until he finishes his university career.

Conditions in America are different; children of laboring classes take honors with the sons and daughters of their employers. The white and the black children sit side by side on the commencement platform. Worth determines standing. The best wins the favors, no matter where he has been reared.

The Germans as a nation cannot comprehend such conditions, hence it is that German uniformity will not suit Americans whose conditions, brought about by a republican form of government, have no boundary lines. In France, some freedom has been given, as far as the letter of the law is concerned, but the classics hold

such undisputed sway that their so-called freedom accounts for little.

The interests of American students are so varied that uniformity in the curricula of the high schools would be totally insufficient to meet the demands of the times. Such courses have been tried, but they are now the exceptions. Uniformity is a phenomenon which belongs to the courses of high schools of previous decades. All are not created equal in mental and physical capacity, neither do all live in the same environment. A whole universe of new activities has stirred ambition and enticed conquest. There are no bounds to the field of science. The spheres of commerce, mechanics, literature and art, compared with these spheres of half a century ago, are varying more than according to the cubes of their like dimensions.

I have endeavored to show that existing conditions in America do not demand a uniform product from our high schools. Let us next consider "Elective Courses."

The examination of courses of study of some of the most progressive high schools reveals two noticeable facts: 1. That their courses are elective; and 2. That there are certain constants existing in nearly all of them. The high schools of Pennsylvania are serving a three-fold purpose; they are preparing students for college or the university, for the state normal schools, and for the ordinary occupations in life. Out of a class of twenty-three graduated this year from the high school of West Chester, Pa., eight will matriculate at college and the university, three will enter the senior class in a state normal school, and three will pursue higher courses in music. The remainder have probably finished their educational careers. Differentiation must be made between those whose aim it is to take courses leading to these various ends. There must be a distinction made between the dull and the bright pupils, between those who have had the refining influences of books and cultured homes, and those who come from homes of less favored classes. This is clearly realized by our strongest high school principals and superintendents.

The annual report of Superintendent Seaver, of Boston, is almost entirely a consideration of the elective system for high schools. He explains how it may be expected to solve the problems of secondary schools and how difficulties may be overcome or avoided by it. Quoting from him, "It is not a knowledge OF the subjects among which a choice is to be made, but some knowledge ABOUT them, which is needed for a wise choice; and this knowledge *about* subjects is easily obtained from persons who have knowledge *of* them. All a pupil needs is a fixed purpose in the pursuit of his education, and some knowledge of the degrees in which different studies may be helpful in the attainment of his purpose."

If it be asked what shall be done with those who have no fixed purpose, the answer, in my opinion, is, help them to form an aim, arouse some ambition in them, help them to choose a course, and then compel them to satisfy its requirements. These pupils must be forced to work under any system, elective or uniform, and the ambitious pupils must not be restrained by an inflexible course because of the drones.

The head master of Roxbury High School says, "The elective system forces the pupil at the outset to be conscious of what he is doing; it makes him perceive that gains and losses depend upon his own voluntary attitude. To prescribe every study renders dependency habitual, and fails to train the will."

The testimony of F. W. Atkinson, Superintendent of Schools in the Philippines, is, "On the whole, I believe the elective system is most favorable to the boy and girl of brains. The strong and ambitious are given every opportunity to take extra subjects and make extra preparation"; and further, "Electives are desirable and practicable."

C. H. Thurber writes, "An absolutely uniform product is no longer demanded or expected from the good high schools of any country. The problem in every civilized country that has set itself seriously to the task of educating its people is, how best to differentiate somewhere in the school course the different classes of students who are ultimately to take quite different positions in the active world. The elective system in its essence means the adaptation of the studies to the individual. The ideal curriculum is the individual curriculum; and there is no limit, except that set by the mathematical law of permutation and combination, to the number of curriculums that may be developed in a school."

This from Hon. Henry Sabin, of Iowa, "To me it is as clear as the light of day that the high school course does not need enriching, but it needs to have injected into its veins so much of the spirit of elasticity that the pupil may take those branches and those only, which he and his friends believe will best fit him for the business which he wishes to follow."

The former editor of *Education* is more conservative on the subject and would have the elective system open to those who are born with a manifest destiny toward some particular line of work, to exceptionally bright and thoughtful pupils, and to those who are fully amenable to the influence and advice of especially intelligent parents and instructors.

The *School Review* is most enthusiastic on the subject of election. While I cannot subscribe to so much freedom in the use of electives as it advocates, yet a careful study of the numbers which bear upon this subject makes it very clear that many vexing high school problems can be solved by its use.

There are certain kinds of knowledge which are found among all educated people—a few constants which should be found in all courses, elective or uniform. Of these the mother tongue should be a part of every course, and is of primary importance; mathematics, also, should not be ignored. I am unable to get away from the idea that a person can be thoroughly educated without understanding mathematical reasoning.

The work of first-year pupils should, in my judgment, be nearly uniform. Their environment differs so widely from that of the grammar school where nearly all subjects are elementary and taught by one teacher, where classes are smaller, pupils are younger and without having formed any definite aim in life. After they have become accustomed to the sur-

roundings in the high school, new ambitions are aroused in them. They find themselves surrounded by upper class pupils who *have* an *aim* and an ambition to accomplish the purpose for which they are striving. New fields of learning are opened to them. They begin to feel that they owe a duty to themselves and to their fellowman, and now is the time to work towards accomplishing definite aims. Nature has changed them from childhood to incipient manhood and womanhood. They can no longer be forced to obey without being reasoned with. They must be guided and restrained by advice. Passions work strongly within them, but these must be restrained. They have not yet acquired knowledge *about* subjects which lead to specific ends. They have not become accustomed to their environment. The beginning of the second year is not too late to elect a course, provided there is a four years' course in the school. With the uniform foundation laid during the first year, the courses elected for the three remaining years should be such as to fit the student for college, for business, or for the ordinary occupations of life.

The opponents of the system argue that the pupil, no matter what year he is in, is not competent to exercise the right of election, that it is folly for him to take a business course when he doesn't know but that he will be a chemist or a professor in a college. Not knowing what his future is to be, and, if the student himself has any idea, not respecting it, the upholders of a uniform course would prepare him for anything that might happen to cross his pathway; but does any one believe such preparation will be complete enough to satisfy the demands of business and of colleges and professional schools of these times?

Dr. Tetlow writes, "They assume that crude youths of from fourteen to eighteen, who have in advance no knowledge of the subjects, are competent to direct their own studies. If not themselves, that their parents are competent, and that the young people will accept their choice; that if both pupil and parent are incompetent or disinclined to direct the choice of studies, the principal of a school of from five hundred to two thousand pupils can adjust himself to individual needs and aptitudes, and wisely guide the choice of pupils."

Do they mean to tell us that boys and girls of high school age do not have aims—definite, well-thought-out plans? Have they made an effort to find out what aims exist among their students? Or do they assume the inability of a student to formulate a plan for future life?

Let us not deceive ourselves. With all the various occupations and professions open to them, most boys and girls do have an aim. If there are those who do not have any plan, and there are always many in a large school, it is not a difficult matter for a principal to arrange a way by which some of the avenues of life may be opened to them. Having had the experience, I know it can be done and I have never had a student fail to show his appreciation of the effort. The disposition of the pupil can be learned during the first year, and by the time elective courses are open to him, a suitable course can be suggested which will lead to some desirable end at least. If the elective courses are carefully arranged, there can be no more danger in advising a course suitable to the disposition of the pupil without an aim than there is in compelling him to take a uniform course which does not lead to any particular end.

The third division of the subject is "Elective Studies." The advocates of these would perhaps allow pupils to elect whatever studies they please to elect no matter what sort of program such studies would make for them. Knowing high school conditions as I have found them, I cannot understand how the necessary organization can be maintained with the variety of courses that such freedom would make. It does happen that there are in most high schools several students whose health or whose circumstances will not permit them to take a *complete course*. To such students elective studies should be available.

I do not think it wise to present a list of elective studies to all pupils and allow them to choose those which may have no relation whatsoever. Elective courses should be offered only after much study and reflection on the part of a wise school management. The courses should contain certain constants and studies that are correlated in such a way as to lead to a preparation for a definite line of work. They should aim to fit the American youth for the high callings which this nation, more than any other nation, has in store for him.

Dr. L. S. Shimmell, of Harrisburg, was to read the next paper, but asked to be excused, as he found it necessary to go home on account of the extreme heat. The paper was forwarded to the chairman, and is here given:

COMMON BRANCHES IN THE HIGH SCHOOL COURSE.

a. *Which Ones?*
b. *In What Years?*
c. *To What Extent?*

The course of instruction for secondary education in the public high school must be determined, first, by the course of elementary education, and, second, by the object of the high school. If the object of the high school were one and the same with the object of elementary schools, the questions I have been asked to answer would be less difficult than they are. The high school curriculum everywhere is indisputable evidence on the face of it that it has a double object: immediate preparation for life and preparation for the higher institutions of learning. In its character as a finishing school, the high school has the strongest hold on the support and appreciation of the public at large. It has been called the people's university because it is, as a rule, at the top of the popular system of education in America. Considering it thus, the high school is a continuation of the elementary school; and there can be no question about teaching some of the common or elementary branches in it. I shall not presume even that there is any one here who would dispute the claim of some elementary studies to have a place in the high school course.

In answering the queries propounded, it is therefore not necessary to discuss the question whether in the high school, considered now as a finishing school, any of the elementary branches should be taught or not. We all agree that some of them should. It is the other constituent object of the high school—its preparatory work for college that is responsible for the queries. What? When? and How much? If high schools were not college preparatory as well as finishing, the common branches would need no advocates to defend their rights in the high school before "committees of ten" and committees of the whole. Let us then first weigh the two objects of the public high school. Which has the greater right to determine what shall be taught in a high school—the preparatory or the non-preparatory purpose? or are they of equal power as determining factors in this matter?

It used to be the practice of the Supreme Court of the United States and of Pennsylvania too, by the way, to look into the intent of the framers of the Constitution when a law was to be tested as to its agreement with that instrument. That was before the halcyon days of governing colonies and "ripping" municipalities. Now we first read into the Constitution what we desire to read out of it. In considering whether the course of our high schools shall be more of a finishing nature than of a preparatory nature, or *vice versa*, pardon me if I pursue the old-fashioned course of looking into the intent of the original constitution of the high school for a minute. In doing so, however, I shall not go back to the Colonial days. The Boston Latin School of 1635, the New Amsterdam Latin School of 1659, the William Penn Charter School of 1698 and the King Williams School of 1696 at Annapolis, were not the progenitors of the modern high schools. They were not American institutions, but English and Continental, and were founded when the classics reigned supreme in higher education. The typical high school of to-day was constituted in the early part of the 19th century, when education by the State became a part of the program of democracy. Before that time, higher education as provided by colleges and academies, received little public support. The colleges and academies were chartered by the State to manage their affairs as close corporations and received some aid in land or money. But they were private institutions, as the decision in the Dartmouth College case conclusively proved. The clear definition of the legal status of existing higher schools which was given in that famous case by the United States Supreme Court strengthened the rising demand for schools of a higher grade which should be public throughout. The demand came chiefly from the middle, and especially the commercial, classes. The first high school of this period was the English High School of Boston, 1821. In its constitution we see the beginning of the reaction against the mediæval classics of the two previous centuries. It was an American "realschule" founded with the design of "furnishing young men of Boston, who are not intended for a collegiate course of study, and who have enjoyed the usual advantages of the other public schools, with the means of completing a good English education." Its three years' course included besides English, the French and Spanish languages, physics, mathematics, mental and moral philosophy, and general history. As far as known, the next city to follow in the establishment of public high schools as part of the system of public education, was Philadelphia, 1836. Her Central High School for boys, according to the language of the Act of Assembly, was intended "for the full education of such pupils of the public schools of the First District as may possess the requisite qualifications." The institution at the time of its inception was a free college, but not preparatory for college, and it retained this character for many years. It was related only to the system of elementary education in the public schools of the city. It was simply a finishing school of a high grade in which thousands of leading men of Philadelphia have received their education. Some fifteen years later Pittsburg, Lancaster, and Easton topped out their public school system with a high school. In Philadelphia, a school similar to the boys' high school, was established for the girls, 1840; and to emphasize its relation to the schools below, it was made partly a training school for female teachers. The act of 1854, expressly provided for what had been done here and there before, namely, grading schools and the study of the higher branches.

There never was a time in the history of the public schools when the authorities could not provide for higher education. If the power was ever questioned, all doubt regarding the matter was removed by Judge Cooley, in the Kalamazoo, Michigan, case. But prior to that time, 1874, the higher work done in public high schools was, as a rule, confined to such branches, as, in the language of the men who designed the Boston English High School, furnished the material "of completing a good English education." Considering, therefore, the history of the constitution of public high schools, we must admit that the finishing or non-preparatory studies have a priority of claim to a place on the course of study. The preparatory studies made their entrance and staked off their claims after Judge Cooley had decided that "instruction in other languages than the English" could be made free in high schools by public taxation.

There are other reasons why in making up a course of study for the high school, the finishing studies should have the greatest consideration. Statistics are not required to remind us that a very small proportion of those enrolled in high schools come out of these institutions, whether graduated or not, and go to college. Nor is it probable that a time will ever come when a majority will do so. So too, we are all familiar with the fact that the number of girls in the high schools of this country is much greater than that of the boys—126,379 to 85,219 in 1890-91—while the men in college outnumber the women greatly—38,175 to 11,474 in the same years. It appears from this comparison that a large majority of those who graduate from the high school and do not go to college are girls. So if a high school is organized with more consideration for entrance to college than for entrance upon life, it is not done on the principle of the greatest good to the greatest number. Again, college preparatory

work is harder than finishing work of the elementary course; it requires longer hours and a more vigorous application. Zeal and ambition are needed to master the tasks. The college preparatory pupils have these in greater abundance than the others, because they have a definite object in view. Now if the preparatory course receives more attention in a school and is emphasized more than the finishing course, the pace set for progress is too rapid and the intensity of application too great to accomplish the ends and aims of the non-preparatory course. In the latter, a permanent love and interest, which will lead pupils to pursue subjects after school, must be created. Vistas into the various fields of human knowledge must be opened or they will never be opened. The high school as finishing school must do work of the same nature as that of the college, only on a less extended scale. It must introduce the pupils to the intellectual treasures of the human race. But nobody knows better than the college professor himself that such critical and unalterable work can not be done by the fast schedules of preparatory schools. It is the college preparatory requirements that are mainly responsible for the high pressure against which so much is said and written these days. It is Latin, Greek and German; higher algebra, solid geometry and trigonometry; and extended courses in physics, chemistry and botany—all taught for the sake of entrance into college more than for any other good reason—that make our high school courses burdensome to those who never expect to go to college. The same diploma is given to all graduates alike—preparatory and non-preparatory, and so the same amount of work is required of both. If we ask the question why this is so, the answer must be that we have disregarded the historic claim of the finishing course for priority of consideration. No one at this day wants to deny the right of pupils to prepare for college in the public high school. I rejoice with all others who can prepare their boys and girls for college at the State's expense. But let us not lose sight of the original intent of the high school. Conditions have not yet changed so much that that intent is impractical and inoperative. It is a mistaken view to take that the numerous college graduates now in the schools as teachers are mainly employed to drill preparatory pupils in classics, paradigms and mathematical formulas required for college entrance. They should be employed also—and more for this purpose than any other—to finish the education of the boys and girls who will never again come under the influence of a cultured and liberally educated teacher.

Having now assumed the position that the high school as a finishing school should be the determining factor in the making of a course of study, I will proceed to answer the questions asked on the program. In answer to the first—which ones?—it should be said that all those not completed in the elementary schools should be continued in the high school. This should be done even if we have no time left in the high school for any one of the so-called higher branches. It is much more profitable, as a rule, to work an old mine as long as it produces fairly well, than to uncover a new one. In the high school, knowledge should be applied and made practical. The instruction should lead pupils to make inferences and to do inventive thinking. This can best be done in subjects where the pupils have worked for some time. Probably the one branch of the elementary course upon the continuation of which we are all agreed is the English language. It is not alone inexhausible, but the demand for its use in life is without limit. As to arithmetic, I have positive convictions that it should have a place in the high school course. If there is no other way to make room for it, let elementary algebra be taught in the last year of the grammar grade and arithmetic dropped there. Much time is wasted on arithmetic in the elementary schools by attempting to do things for which the pupils will not have the necessary maturity of mind till they reach the high school. Geography? No. It consumes too much time even in the elementary schools. The view of the world is enlarged in the instruction in natural science and history, and need not therefore be continued as a separate study. United States history should by all means be continued in the high school, with special reference to economics and civics, and with more stress on the Constitutional period than on the Colonial and Revolutionary. Physiology is generally so much of a book study in the elementary schools, and therefore so much miscomprehended, that it is a necessity for a better understanding of the subject to resume it in the high school; of course, the art of music and drawing can not be dropped from the high school course. Penmanship may be if it has been properly attended to in the grades Spelling for all purposes, except to win prizes at spelling matches, can be finished in the grammar grades, provided it receives incidental attention all along the high school course.

I am aware that nearly the entire list of the so-called elementary or common branches is included in the branches which I have named as demanding a place on the high school course. But I had prepared to take such a position in the introduction by means of historical and other arguments. I desire now to add a pedagogical reason for their continuation. The major part of the work of the teacher in the grades is to inform the mind with the elements of knowledge pertaining to the common branches. But education must be carried further. It must not end with the process of receiving information. What was the minor process in the elementary schools must become the chief process in the high school. The activities of the mind by which expression is given to ideas must now be brought into play on an enlarged scale. There must be external expression through language, through the exercise of skill, and through work of various kinds. Ideas must be made actual and external. The best field for such a process is in those branches in which the mind is well informed. Hence the pedagogical argument that the common branches should be quite generally continued in the high school.

The second and third questions—In what years? To what extent?—I will answer without separating them in time. Bearing in mind that the high school should be especially concerned in the exercise of the mental activities on the materials of knowledge already required, the

English language should have a place on the program throughout the course. In the first year there should be a thorough review of the universal elements in language. Grammar is not so simple that it can be finished for all the practical purposes of life in the grammar school. If the entire year is not needed for the review, a course, more or less extended, in historical grammar may supplement it. This will give all the pupils a broader view of the laws of the English language. Composition and declamation should be practiced throughout the course. This is important in order to make the ideas acquired in the elementary school and daily acquired in the high school actual and external. Assimilation and activity, receptivity and spontaneity, must go hand in hand in the process of education. The danger is in too much assimilation, in too much receptivity. Composition and declamation are needed to adjust a proper balancing of information and expression.

As to arithmetic, I would say that it too should be on the programme of the first year. Not one patron in a hundred will object to arithmetic in the high school. Most high schools would increase their hold on the public if they gave more attention to the common branches, especially arithmetic. It is the teaching of the "ologies" and the classics that are responsible for whatever fault is found by the people with high school courses. But it is not alone the favor of the public that is gained by teaching arithmetic in the high school. One year of arithmetic in the high school is worth at least two of it in any of the grades, owing to the greater maturity of mind on the part of the pupils. The teacher now has greater opportunity of cultivating self-activity by means of independent and original problems. It may be said that he can do all this in algebra and geometry. So he can after he has grounded the pupils in the fundamentals of those subjects—a work that requires some time, while in arithmetic he can begin at once to make application of its definitions, principles and rules.

United States history likewise can be resumed in the first year of the high school. We hear much about the difficulties encountered by pupils in making the transition from the grammar schools to the high school. If we continued more of the grammar school studies in the first year of the high school—giving the pupils enlarged views in these subjects and cultivating self-reliance and the power of application, the gap that now so often exists would be bridged over most satisfactorily. It is unquestionably a mistake to turn children at the age of fourteen to fifteen into entirely new fields of knowledge and mental activity. Two new subjects in the first year of the high school course is all that should be incorporated into the body of the work. The study of civil government—State and National—can be very profitably and successfuly taught in the freshman class. During the second year, I should give a more extended course in United States history proper—with special reference to economics, dwelling mainly on the Constitutional period.

Physiology is a good subject for the first year in the scientific line of studies. It should be made objective, illustrational and observational, so as to prepare pupils for the methods employed in whatever other natural science may be in the course later on. Life interests, gymnastics, calisthenics, hygiene, and self-preservation should be emphasized, in order that pupils learn the all-important lesson at the outstart of their higher education, that a sound body is indispensable to intellectual achievements.

I do not deem it necessary to discuss the questions assigned to me in relation to the arts commenced in the elementary schools. Everybody concedes the importance of giving them a place in the high school. To sum up the leading thoughts of this paper, I repeat that the high school course should be organized with due respect for the original purpose of high schools, which was so well expressed by the founders of the English High School of Boston, namely, to "furnish young men [and likewise young women now], who are not intended for a collegiate course of study, and who have enjoyed the usual advantages of the other public schools, with the means of completing a good English education."

Principal Charles S. Foos, of the Reading High School for Boys, read the last paper, on the question

SHOULD COLLEGE REQUIREMENTS IN ENGLISH BE TAUGHT TO PUPILS NOT ENTERING COLLEGE?

In order to answer satisfactorily the question, "Should College Requirements in English be taught to Pupils not intending to enter College?" one must understand and appreciate the history and the present status of English teaching in secondary or high schools. To this end it seems fitting briefly to review the important efforts made to improve methods of English teaching, and the events that led to the adoption of the scheme of English classics now required for admission to college.

Teachers, who have been in the service fifteen years, no doubt, remember the disheartening results in teaching English. In many schools it was not only an expedient, but a farce. It was a sort of hap-hazard experimentation. Few teachers even triumphed in teaching English literature, a far less number in teaching English composition. The teaching of English, in a word, was a failure. The importance of the work, however, was recognized, but the majority of teachers had not yet discovered an intelligent method of working. The pedagogical world, however, realized that something must be done, and faithful men and women were methodizing their experiences, from which rational methods were deduced. To-day there is no excuse for inefficient teaching in English.

In 1892, the National Educational Association took up the subject of English teaching, realizing the necessity of a systematic, well defined, more or less common plan of teaching English. The result was the appointment of a committee that reported in favor of regular instruction in literature and composition, and recommended that a number of masterpieces of English literature be assigned for students desiring to enter college; that each of these should, so far as possible, represent a period, a tendency, or a type of literature and cover the period from

Elizabeth to the present time; that several of these books be for critical reading, and that subsidiary reading be encouraged. The report implied that such a course was suitable for students not intending to enter college. Thus was laid the foundation of our present English requirements for college, and the recognition of the fact that English instruction should be essentially the same whether students intended to go to college or not.

Beyond question this report had a wholesome and wide-spread effect on English teaching. Instructors began to think more definitely, to plan more naturally, to teach more enthusiastically. English now began to be the mooted subject in teachers' gatherings. No live teacher could ignore the subject.

The Association of Colleges and Preparatory Schools of the Middle States and Maryland, at its meeting, December 1 and 2, 1893, appointed a committee to deal with the subject. In the five years that followed, this committee with representatives from other educational bodies decided upon the present formula of English college requirements, with the statement of the fact, however, that its work was simply a recommendation, and that colleges and preparatory and high schools were bound only so far as they individually and officially sanctioned such action. The opinion of the conference, too, was that the courses should be identical for students who do and who do not go to college. Many other educational associations took similar action. Thus nearly all the great educational bodies have practically indorsed the present scheme of English instruction with the suggestion that no discrimination be made for students who do or do not go to college.

Another impetus given the conference report was its cordial and universal acceptance. It proved conclusively, I think, that there was much in it that was worthy, much that was commendable. It gave English teaching a stability; it gave it a high place in the curriculum. In ten years English teaching had been revolutionized. It had emerged from the intangible to the tangible, from the irrational to the rational. The whole history of teaching contains no such an awakening, no such a pedagogical progress.

To determine adequately the subject under discussion, one must keep in mind the aims in view in teaching literature or English classics, and if these aims apply equally to boys who go or do not go to college, then, it seems to me, the question may be answered in the affirmative. If they do not, then the question must be answered in the negative. The aims to be attained in teaching literature in my opinion are: To acquaint pupils with the literary masterpieces; to inculcate a literary appreciation; to inspire them to express their own thoughts clearly, interestingly, pleasingly.

No one, I presume, will argue that any pupil should be debarred from the study of literature or English classics. All agree that all pupils should be acquainted with the priceless friends—books. Then, too, I think all agree that, if possible, it is desirable that pupils cultivate a literary appreciation—that keen discrimination that leads them to select the worthy and reject the unworthy—that taste which causes them to revel when they enter a library. Another desirable step in the education of the pupil, beyond question, is the teaching of composition—the ability to create a material body—to put on paper that subtle, evanescent something we call thought and emotion, be that creation only a letter, or be it a sermon or a great epic.

If, then, the aims of literary instruction are equally important to all students, and I think all will assent, and many agree, that they are more important to the non-college going students, then the only questions that remain are: Do the authorized requirements furnish the proper material to teach these aims? If they do, then they give the college student what he needs. Do the authorized requirements give the boy who does not go to college what he ought to have? If so, then the matter is settled. The proposition resolves itself into a question of choice of books and their adaptability to the required needs. In other words, Can boys who are likely to cultivate a deeper, keener insight into the thought and emotion of the literary masters learn the alphabet of this appreciation at the same fountain as do the boys or girls who shall never have the more refreshing draughts? In my judgment all must tread the same path. The appreciation of the good, the pure, the beautiful, comes in only one way. The question with the college student is only one of scale. He will climb to greater heights of the same mountain and inhale the rarified atmosphere of the peaks. Keats loved Spenser; Lowell, Keats; Tennyson, Virgil; and Arnold, Homer, as we never can. Their capacity was augmented by a higher knowledge of the secrets of the art. A keener knowledge brings a keener enjoyment. The boy, then, who does not go to college may not appreciate in the end the great literary masters as does the boy who goes, yet contentedly, happily, he may breathe the delightful atmosphere of the mountain slopes. The same path directs them—only the one continues to climb.

The question now narrows itself simply to the wisdom of the choice of the classics prescribed. This, I presume, is the stumbling block after all. This is the knotty problem. Here, I suppose, is the point where educators may never agree. One desires no limitations; another would place them; a third takes a middle ground. Personally I have never asked any one what his experience with the selected English classics has been, hence in forming my conclusion it is simply from my own experience. In fact, I think these discussions should be "experience meetings." Let each tell what he has done and how he has done it. On this account I offer no apology for the random character of this paper.

I have read a little, a very little about these college requirements. From this reading, however, I learn that there is a considerable objection to the rigid character of the requirements and to some of the books selected. The very objectionable ones—"The Flight of a Tartar Tribe," "Palamon and Arcite," "The History of the Plague in London," "Pope's Iliad," have been or will soon be dropped from the list, and I think the substitutes are superior; but I believe, too, that the committee did what it deemed wisest at the time. Then, it must be remembered, too, that these were inserted in

the first list, when the whole question was an experiment.

The most formidable objection, I take it, however, is that there should be any set books. If I understand the negative criticism, it is that, on account of a prescribed list of books, high schools have no ideas except to pass entrance examinations; that high school teachers must dodge about among authors and continually look up annual catalogues; that such a method ignores human facts; that it goes away from the main line of interest and adaptation; that it is mechanical, lives from hand to mouth, and succeeds only in passing the examinations; that under these conditions it is useless to study pedagogy and the psychology of adolescence, to formulate principles, to observe one's own constituency and feel one's way from the known to the unknown; that the function of the English teacher is a small and ridiculous one; that it is humiliating to be debarred from planning one's own work in principle and detail; that teachers ought to be permitted to outline their work in accordance with the psychic principles governing the case, that colleges should accept an English course well thought out and clearly producing good results.

This is certainly the ideal plan, but all teachers, who must teach English, have not the time nor, in some cases, the ability to follow this plan. But as I have already intimated, the question is a personal one. In order to answer these objections each teacher should recount his own experience.

Prior to my adoption of the English college requirements I mapped out and used a course of reading and followed it with reasonable success, but I think that the work has been more far-reaching since the adoption of the college requirements. In the boys' high school at Reading the English work occupies five hours per week for two terms in the first year, two terms in the second year, three terms in the third year and two terms in the fourth year. In addition to the study of grammar, etymology, the history of the language, rhetoric, the history of American and English literature, the writing of compositions, essays, orations and debates, there is a course of critical reading, including in the first year Franklin's "Autobiography," Irving's "Sketch Book" and any other books that the teacher may elect.

In the second year the college requirements are taken up. Elliot's "Silas Marner," Scott's "Ivanhoe," and Goldsmith's "Vicar of Wakefield" are read. Outlines prepared by the principal are used. These outlines contain suggestions, questions and topics for research work, and general directions to guide the student. In studying the "Vicar of Wakefield" the pupil gathers a general knowledge of the novel or story from the early love of romance and adventure in the time of Elizabeth, through the transition period of Defoe and Swift to the early modern novel as produced by Richardson, Fielding, Sterne, Smollett, and others with a brief survey of the nineteenth century novelists. The technique of the novel is emphasized. Pupils learn what the true novel is, how it differs from the more recent story, the mechanism of the plot and the general structure of the story. This he applies in reading, pointing out the strong and weak points in the story in hand. He also makes an analysis of several characters, outlines the plot and minor incidents, studies the history and customs of the time, and their influence on the particular work, together with written themes, such as are required for admission to college. This composition work is independent of the regular theme work. The fact that this is preparatory college work may or may not be incidentally mentioned in class. The main purposes of the drill are ever prominent, and by the time the three books of the second year are read the pupils have a definite knowledge of the novel.

In the second year the "DeCoverley Papers," "The Merchant of Venice," "The Last of the Mohicans," "The Rime of the Ancient Mariner," and the Princess are studied. With "The Last of the Mohicans" the novel is studied from the American point of view. The American novel and the short story furnish interesting discussions. The "DeCoverly Papers" furnish the basis for the study of the English essay, its sources, its varied forms prior to Addison, its influence, the nineteenth century essayists, and how they differ from Addison. The papers are read critically with special reference to words and their sources; sentences and their grammatical and rhetorical structure; paragraphs; the state of society in Addison's time, political parties, manners, customs, society, etc. Again, several characters are sketched, and short themes written on topics selected from the papers.

The "Merchant of Venice" serves as the guide for the study and investigation of the drama. This includes the sources of the drama, the mystery and the miracle play; the morality and the interlude. Shakespeare's life is carefully read. Little at this time is done with his work beyond a critical study of this play, including obscure words and phrases, the origin of the stories, the main and the minor plots, contrast, climax, and the general mechanism of the drama. Portia and Shylock are subjects for careful character study and are built up physically, morally, and intellectually, from lines in the play.

The "Ancient Mariner" and "The Princess" entail the study of poetry and its elements—stanza, rhyme, metre, etc. It includes the history of poetry, its source, the great ancient and modern poets. The poems themselves are analyzed in a general way, so as to bring out their beauty, their diction, and the special characteristics of the best poetry, truth and seriousness.

In the fourth year, Burke's Speech on Conciliation, Macaulay's Essays on Milton and Addison, Milton's Minor Poems, and Shakespeare's Macbeth compose the English reading. Burke's speech is studied as the representative of the oration, which is also discussed. The skeleton of the speech is carefully made and studied. The text furnishes material for rigorous thetorical study; words, sentences, paragraphs; the principles of composition; unity, emphasis, coherence; the qualities of style; clearness, force, and elegance; the higher elements prominent in the oration, passion, imagination, truth, logic.

The other works give an opportunity for a more detailed study of the drama, the essay,

and poetry, and it is needless for me to burden you with the detail of the outlines. Of course, these outlines are not yet in the shape, I should like them, but each year with new inspiration, I hope to make them stronger weapons for the work they are intended to accomplish. At the end of this course the students find themselves prepared for college, and the students who do not go to college have an acquaintance with literature—a friend the like of which cannot be found in life and I hope, too, an appreciation of this friend that will grow dearer and dearer, and lead them to higher ideals and motives. Yes, my friends, I answer, this question in the affirmative.

Dr. C. A. Herrick, of the Boys High School, Philadelphia, asked if a difference should be made in the composition work that is required to be done, in the different classes, by the collegiate and non-collegiate pupils.

Prof. Foos: I make no difference. Of course, we send 50 per cent. to college, which must be considered. At no time do I say "This is preparatory to college"; I emphasize the fact that all must learn English composition. I impress upon the teachers that nothing be said in these classes about college. Three years ago, when I was teaching English, I required three themes a week; but now the requirement is that each pupil present 100 themes before graduating.

Supt. Jones asked how Prof. Foos distributed the composition work over the four years.

Prof. Foss said the first year they had 20 *short* themes—boys of 11 to 16 had only a half page of foolscap. The criticism is constructive, not destructive. Every composition is a new creation, with a possibility of greatness in it. The second year the same plan is followed. In the third year we try description—of course, it is crude at first, but we soon get good results in improvement in the mental pictures. Next we have narrative—a story with a point or climax. All this means work for the teacher—you will keep late hours sometimes, but you learn to know your boys. In the latter part of the third and in the fourth year, we have exposition and argument. We had one of our graduates who was in the Penn-Cornell debate come in and talk to the boys; they were much interested. Considering that we are in a town where English speaking has little place and correct speaking almost no place, we are getting good results.

Supt. Jones: Do you take themes from the general literary work?

Prof. Foos: Sometimes. And we have a list made up from the college requirements. My boys who went to Cornell said that out of twenty-five subjects given there they had already written on fifteen of them.

Prof. Primmer, of Temple College, said that although not a member of the body, he was greatly interested in its work. The plan outlined in the paper is similar to the one recommended by the National Educational Association, and the one advocated in Mr. Webster's book. The arrangement is about the same; but while he believed in placing narrative before description, the speaker would have description before narrative. But we need not be bound by any rigid scheme. For instance, some things in the way of argument will appeal to the lower grades, in discussion of public questions and the like; he would intersperse argument and exposition from the beginning. We must remember in all these discussions that the high school is not primarily a college feeder, but for by far the larger number is the rounding up of their education. It is the finishing school—not ideally, but practically.

Prof. E. W. Eldon, of Denver, Col., said he was not a member of this body, but of the College Association. We are interested as to how we are to get the work done as outlined here by Prof. Foos without burdening the teachers too heavily. He would like to know how many exercises per week Prof. F. has, and how many pupils to an English teacher.

Prof. Foos: Three teachers have about 30 pupils each; they hear some 30 recitations per week. I correct about 2000 themes in a year, hand them back, and have them rewritten unless they are very good—95 per cent. are rewritten. Ours is a boys' school, but I would follow the same plan with girls.

Being asked for various details, Prof. Foos read from his printed course, the product of 18 months' experience. For the first year there is a fixed course for all. At the beginning of the second year a meeting for parents is held, and choice is made between three courses—Classical, Latin Scientific and General Scientific. In the last year there are a great many electives. Our diplomas specify the course pursued.

In answer to a further question, Prof. F. said the boys in their first year need con-

siderable help on the common branches. We have nine teachers to two hundred and seventy-five pupils.

At this point the discussion turned back to the first paper, Prof. Foos asking the writer if he would have us allow pupils to take as much of either or all courses as they choose.

Prof. Philips: The course is uniform the first year. After that they choose their course. I am a believer in elective courses, but do not believe in elective studies.

Prof. Gordon: One great trouble with so many electives is that we run out of teachers.

The Chair: In our schools we have certain "required studies" as we call them; but I am not prepared to advocate our plan fully. The difficulty is that pupils are inclined to follow the line of least resistance, and we may allow them too much liberty.

Prof. Gordon: I suppose that Mr. Foos allows to the pupil only a certain number of studies?

Prof. Foos: I am not very exact about it. I had one boy who selected the Commercial course and at the end of the third year changed off to Classical, and passed the Princeton examination on one year's Greek preparation. I believe in elasticity of courses.

Prof. Primmer: I am inclined to insist on consecutive study. I do not believe in so very much "elasticity."

Prof. F. S. Edmunds, of the Central High School, Philadelphia, said they had two courses from the beginning—the General course and the Commercial course. We have electives every year, but the cleavage at the beginning lasts all through. In the senior year they have more freedom, but must fill out a fixed programme. This gives the teacher a chance to follow new lines, in addition to those first chosen. The subjects most interesting to the teacher are likely to be so to the pupil; and this helps the teacher by reflex influence. One English teacher who failed to arouse interest in work on Milton in the Senior year, upon changing to the modern poets—Browning, Matthew Arnold and Tennyson—was surprised at the interest developed.

The conference then adjourned, and the members inspected the High School, conducted by Dr. Herrick, whose descriptions and explanations made this a rarely interesting opportunity to the visitors.

GRAMMAR AND INTERMEDIATE SCHOOLS.

THIS Conference met in the Assembly Hall where the general sessions were held, at 2 o'clock on Wednesday afternoon. Miss May C. Ermentrout, of Reading, presided. The first paper was by Prof. S. L. Kreemer, of the West Chester High School, on

COURSES OF READING FOR THE GRAMMAR GRADES.

I approach this discussion with much timidity, because, as Mr. Burke says in his speech on Conciliation, "It is an awful subject; my little share in this deliberation oppresses me." Nearly in vain have the words of the wise been sought that they might give assistance. Much has been said about the reading for secondary schools. An association of learned men and women meet year by year, to advise, direct and outline reading for the high school and academy, but the grammar grade age, a more important period in the child's life, seems to be left without consideration. More important because the trend of life is determined by the time the child is sixteen or eighteen years old, therefore, the determining process takes place during the grammar grade age. A writer on the subject says: "If a child does not, to a certain extent, learn to love masterpieces of literature between twelve and eighteen he is never likely to love them." Its importance is, then, in some directions at least, unsurpassed by any other in the child's life.

As some pupils enter the grammar grades at ten or eleven and some do not leave these grades until seventeen or even eighteen, therefore this paper will consider the grammar grade age from eleven to seventeen inclusive. This takes in most of the adolescent period. That period of change, of enlargement of ideas, when curiosity, sympathy and enthusiasm are most active and should be carefully directed. Desire for excitement, adventure, love and passion, is rampant and runs riot unless carefully guided, curbed or encouraged. Curbed in most cases, as young people at this age are generally voracious readers—from a librarian we learn that it is not an uncommon thing for a boy to take out as many as a hundred books in a year, two books a week—encouraged in some and guided in all. Because of this tendency to over-reading, much that is weakening is devoured. Such reading can be but demoralizing and weakening. Mr. Boone says, "Dawdling means sure suicide for both mind and body," and Dr. Chase adds, "If this be true then the altar of reading is heaped with human sacrifices." This to the writer is verily the truth. Now is the time that boys will be anxious for detective stories, stories of highwaymen and tales of daring; while the girls in the later years of this period desire stories of domestic life, love and self-sacrifice. Any correct course of reading for grammar grades must carefully consider these conditions.

The influence of reading is great, far beyond what at first thought may be conceived. The

psychologist tells us that we are made up of our every experience. When reading, the mind is in a passive, a receptive state that is particularly so with the young. As surely as we are influenced by our associates, so surely are we influenced by the books we read; for the time, we associate with the characters of the book and think the thoughts there expressed.

Since the public library is so nearly an open court for all comers, it is the more important that pupils be taught not only what is good, but how to judge their reading. Vandyke wrote "How to Judge of a Picture"; may not another Vandyke arise and tell us how to judge of a book, and may it be so plain that the young can understand. The influence of books, not in general only, but of particular books, is another thing to consider in outlining the course.

A taste for good reading must be cultivated in the pupils. This is no very difficult task if they are taken in time and the right material used. A librarian of experience says, "I have come to believe that the normal child, and most children are normal, will read about anything with pleasure at the outset, that is—taken before the taste for reading is formed, they may be led to almost any kind of reading. * * * Many experiments and long experience serve to deepen the conviction." Herschel says, "Give a man this taste and the means of gratifying it, and you can hardly fail of making him a happy man. * * * You place him in contact with the best society in every period of history—with the wisest, the wittiest, the tenderest, the bravest and the purest characters who have adorned humanity. You make him a denizen of all nations, a contemporary of all ages." King remarked, "The superior advantage which modern society enjoys over society of five hundred years ago, is printed literature. * * * Books are our crowning privilege of modern civilization." May we not ask with Lowell, "Have you ever rightly considered what mere ability to read means? That it is the key which admits us to the whole world of thought and fancy and imagination, to the company of saint and sage, of the wisest and wittiest at their wisest and wittiest moments. That it enables us to see with the keenest eyes, hear with the finest ears, and listen to the sweetest voices of all times? More than that, it annihilates time and space for us; it revives for us without a miracle the Age of Wonder, endowing us with the shoes of swiftness and the cap of darkness, so that we walk invisible and witness unharmed, the plague at Athens or Florence or London, accompanying Caesar on his marches, or look in on Cataline in council with his fellow-conspirators." Proper courses of reading must, then, furnish material which may be used effectually in the cultivation of this taste for good reading and bring them in touch with the thought of the world, as indicated by Lowell in the selection just read.

Yet other questions arise. What do our pupils read? How do they read? What should they read? At the grammar grade age they read nearly everything that comes in their way, especially if some friend or schoolmate says, "It is good."

To ascertain what, how, and how much pupils in the grammar grades read, a blank form containing the following questions was put into the hands of each of two hundred grammar grade pupils:

1. Do you like to read newspapers?
2. What part of the paper do you read?
3. Do you read magazines?
4. Name the magazines you read.
5. Which would you rather read, newspapers or magazines?
6. Why?
7. Do you read the *Youth's Companion?*
8. What part of it do you mostly enjoy?
9. Would you rather read books, or papers and magazines?
10. Why?
11. Do you get books from a Sunday-school library?
12. About how many have you read this year?
13. Of the books you have read this year, which did you like best?
14. Name the books you have read this year?

From these forms it is ascertained that out of the two hundred all but five like to read something; that one hundred and seventy-eight read newspaper, one hundred and thirty-one read magazines, ninety-five prefer newspapers to magazines, one hundred and forty prefer books to either papers or magazines, one hundred and ten get books from Sunday-school libraries. The answers to the twelfth question, "How many have you read during the year?" vary much. The question itself is ambiguous. Some pupils thought it referred to Sunday-schools only, others thought it meant all books read during the year. From these returns, as well as from other sources, it is beleved that pupils in these grades read too much.

One hundred and seventy-eight read newspapers. By the answers to the second question, "What parts of the paper do you read?" it is found that comparatively few pupils read the parts best for them. The answers run something as follows: The sports, marriages, deaths, local news, notes about the sick, a very few the war news, and fewer the political news. Editorials, as a separate division, was left out. The newspaper will be and should be read, for, as Matthews says: "The mind is like the merchant's ledger, it requires to be posted up to the latest date." To be thus posted, they must be read. But here we encounter another difficulty: "The newspapers are written for everybody; therefore read only the parts written for you," says one. Hence it is evident that the best newspapers should form a part of a course of reading for these grades, in order that pupils may be instructed in what parts to read.

From the third question, "Do you read magazines?" it is learned that the children of these grades do read magazines, principally the *Munsey*, the *Cosmopolitan*, *McClure's*, and others of like rank or rather of like cost. A few read the *Century*, *Harper's* and *Scribner's*. Much of our best fresh literature is found in these periodicals and a sufficient variety to furnish something for each. But here too the pupils need direction; as much that was said of the newspapers is quite as applicable to magazines. It is scarcely necessary to say that the course would be incomplete without some of these periodicals. The *Youth's Companion* is read by many, a good paper for both young and old, containing much that is instructive and entertaining.

As stated above one hundred and forty preferred reading books to either papers or magazines. Various reasons are given which it is not necessary here to state. Stories seem to be the thing sought. It is also noticeable that the choice of reading of girls and boys does not differ much until after about the twelfth year, then generally a marked difference takes place. This should receive due consideration when selecting and deciding upon books to be read.

From the replies to number fourteen, "Name the books you have read this year," it may be observed that nearly all the books read contain stories, and you have but to question the child to find that the book was read for the story only.

Books most certainly must form a part, the greater part, of the course of reading under consideration. But what books? As to grade, some should be quite elementary, while others should be more difficult. This, because some pupils enter the grammar schools who have read much and know how to read so much better than the average pupil; then on the other hand, some of course are not up to the average in ability and something must be had for them. Therefore the books should be of various grades. Having these various abilities with which to deal, care should be taken that too difficult books are not given to pupils to read. The writer has made such mistakes, much to the detriment of the pupils. All light reading is not trash, and Matthews is not entirely wrong when he says, "The light reading so much stigmatized is a necessary prerequisite to a taste for something more substantial." "A horse," says he, "cannot live on oats without hay, so the popular mind cannot digest its nutriment if it is too much concentrated," and permit me to add, if there be too much of it.

As to kind, those which will give a taste for good literature. As Thurber, the Boston teacher, puts it, "That the pupils may seasonably become acquainted with some classics." Those which are primarily for instruction must be furnished pupils. So books of poetry, travels, history, biography and science are put in the course. If directed aright, the boy will now take to biography, travels, certain periods of history, and to poems of warlike character. The girls, now, will readily take poetry, fiction and, from history, the stories of the trials and privations of the American colonists. These are but an open door to history, biography and the heavier fiction. All that is necessary here is the teacher's guidance. No matter what the course of reading it finally depends upon the teacher. A variety of books, magazines and papers should be found in the grammar grades; but the teacher must select the book to suit the individual pupil; what is good for boys is not always good for girls, and what is good for the teacher may not be good for the pupils. To get the desired result, teachers must know their pupils. Child-study is not a fad, it is a necessity. Courses of reading for the grammar grades will be made up of courses of reading for each individual pupil of these grades.

There should be in the course some books descriptive in character, and the descriptions should be strong and true. Some should contain pathos. It is all right to drop a tear "Beside the Bonnie Briar Bush." Let them not breathe too much of that sordid sentiment expressed by Dunbar in,

"A crust of bread and a corner to sleep in,
A minute to smile and an hour to weep in,
A pint of joy to a peck of trouble,
And never a laugh but the moans come double:
And that is life."

Avoid the average Sunday-school book. But let us help the young to look on the bright side of life,—to say with Stanton,

"When you see a sky of blue,
Think that sky was made for you;
When the breeze bends down the trees,
You just think that that's your breeze.
Every blessed drop of dew
Falls upon a rose for you."

The books selected should contain something valuable, though it may be elementary. Let the reading be done with avidity, for as Dr. Johnson says, "What we read with inclination makes a stronger impression."

The teacher must be the guiding star. She must know and love good literature, and continually point out the beautiful and the true until the pupils do see them. Pupils should write in their own language and recite a summary of facts on important statements noted. This will prevent over and careless reading. King voices an important thought when he says, "If all novel readers were compelled, when they close a book, to write out the main doctrine or proposition which is the axis of the incidents and plot, it would be better for their moral education than if they listened once a week to the best lecture on ethics."

The "How to read" must go hand in hand with "What to read." It is said, "We are now in want of an art to teach how books are to be read." "The colleges furnish us with no professor of books," says Emerson. Hear Carlyle, "Our knowledge depends upon what we read after all manner of professors have done their best with us."

Thus by careful training "as the reader progresses in his studies and gains experience, he will find that there grows up in him almost an intuition, by which he can tell a bad empty book from one which will inform, teach, and render him wiser."

Therefore a course of reading for the grammar grades must take into consideration, the age of the pupil—a critical age—his previous and present reading, his environment, home life, his ambition, the method of reading and the object. As to kind, it must furnish a variety of the different classes (history, biography, etc.) and grades, some easy, some more difficult.

When such course is provided, the needs of the individual pupil studied, and a proficient teacher, with time enough to do the work, in charge, then will the desired end be attained. We had thought of naming a number of books suitable for the grades in question, but so many such lists are already in print, that this has been omitted.

Supt. C. A. Babcock, of Oil City—the man who introduced the observance of "Bird Day" into the public schools, with all the good that must follow in its train—continued the discussion of the same general subject in the following paper on

LITERATURE IN THE COMMON SCHOOLS.

"Life without literature," said Cicero, "is death." If this be true, and we have the most implicit faith in the truth of this dictum, it would appear to be not only the duty of our common schools to make the child acquainted with literature, but their chief duty to do so.

What is literature? In a general way we know well enough what it is, and usually think of it as a mass of printed matter larger than a mountain, and beyond the mastery of a child. But let us look closer; let us try to find, if possible, a working definition.

Examine these statements: The cat can mew; the dog can bark; the pig is fat—they have a familiar sound; they are statements of truth; but they are not literature, for they are expression at its lowest power. Compare them with these statement of Burroughs: "The English sparrow is a rowdy." "A rabbit lives under my roof; he feels safe there." "The apple is a rose when it blooms, and a rose when it is ripe." It is evident that in these we have expression raised to a higher power, expression touched by feeling, pulsating with human interests. We may define literature then as the higher powers of expression—differing in degree as one star from another, but always above the first power or mere statement.

The highest literature is that which is most deeply involved, or that which has wrapped up within it the greatest number of interests, the greatest amount of life. It follows that only a master of expression can write literature and only a seer can originate it—one whose personality has concentrated within itself the powers which are generally diffused among a mass of individuals, and for this reason he can express clearly what the mass dimly feels. This is the glory of literature, that it holds a mirror up to life in which it may see clearly what it is and what it may be.

Literature must also endure the test of time, or of wide use; a mirror that distorts will be rejected. The writings of a people may safely be taken as the expression of the intellectual life of that people, "preserved as in a vial," to use the language of Milton.

Education has been defined as the attainment by the individual, in a greater or less degree, of the powers possessed by the whole race. If this attainment could be complete, we should have the perfect racial man. The perfect Englishman would be he who should possess "full summed" all the powers of the English race. Before this process can begin the individual must begin to know the literature of his race. The merest beginnings of education must be then a beginning to master literature—to know the significance of English speech, as used by the masters.

We remember hearing Dr. M. G. Brumbaugh say that the best outcome of any course of study, however long or severe it might be, is the power to read the writers of the mother-tongue. But how shall this be accomplished in the common school? How shall the grades below the High School study literature? Shall it be by displacing some of the books now studied and replacing them with text-books upon the subject of English Literature? Heaven forbid!

We advocate placing in the hands of the pupils, during the time devoted to the reading classes, standard works of literature, to be used along with the regular readers. The readers will not take up much time. President Eliot pointed out a few years ago the fact that the readers used by the average New England pupil during the eight years below the High School could be read through in forty-six hours.

In this connection, the following account of an experiment is permissible: A number of years ago, it was considered a good first year's work to complete a Primer and First Reader. Sometimes two or more First Readers were read by dint of hard work. The first year in school was considered the First Reader grade. Some time later, literature was used in the first grade. At the end of five months, the children had read Esop's Fables, a part of "Mother Goose," a book of selections from John Borroughs, and a little work called "Stories of Great Lives." The teachers were requested to put first readers into the pupils hands, and report how long they required to read them. The result was surprising. Some classes read the readers through in two days, some in two and a half days, while the slowest were only three days, in performing what had been formerly thought a good first year's work.

A word about Mother Goose. We used to believe that children are attracted simply by the rhythm, the ebb and flow of sound, for as jingles these rhymes are perfect, and this is doubtless sufficient to account for the survival of these lines from generation to generation. But there is a deeper reason. These verses are literature of a high order. They take the familiar concepts of childhood and arrange them and rearrange them in new and startling, fantastic but always pleasing ways.

> Hey diddle diddle, the cat and the fiddle,
> The cow jumped over the moon, etc.

They stimulate the little reader's imagination, and invariably start it upon a course of reconstructive development. There is also a delicate philosophy and picturesqueness of incident which touches the reason and the sympathies of children. Witness "Little Boy Blue," "Jack and Jill," "Little Miss Muffet," "Mistress Mary," and many others. The same qualities characterize Esop's Fables, Grimm's Tales, and to a somewhat less degree Hans Anderson's Fairy Stories.

"But," say some, "if children read these trashy stories and think it right to read them, they will become over-imaginative, or, in other words, will develop into liars." We answer that the culture of the imagination is one of the most notable results of these books; but imagination is needed in all processes of thought—must be present before thought can begin. The child needs the reconstructive imagination in order to read a simple history of his country or any other descriptive work. Besides, it is not the person of trained imagination who is most apt to become a falsifier, to mix his images, or to mistake his fancies for memories, as it is not the trained mathematician who is most apt to make mistakes in his calculations. The most dull, unimaginative people are the most likely, if they produce an image, to mistake it for fact,

or to mix their impressions generally. Such people are the peculiar prey of the gossip; they are easily convinced.

Among the books of especial value in this connection are Longfellow's "Hiawatha" complete, Mrs. Pratt's Stories of "Colonial Children," and "Stories of the Revolution," "Alice in Wonderland" and "Through the Looking Glass." The last is especially valuable as illustrating the uses of words and the various shades of meaning which they may represent. To give a child insight into the surprising power of English words to mean different things, probably no two books equal the "Alice Books."

Later may follow "Robinson Crusoe," "Swiss Family Robinson," the "Legendary Histories of Different Nations," "Evangeline," "Miles Standish," "Uncle Tom's Cabin," Dickens' "Little Nell," "Paul Dombey," and "Christmas Stories," Hawthorne's "Wonder Book," "Tangle Wood Tales," "Twice-Told Tales," and "Grandfather's Chair."

In the upper grades may be read with profit some of the lives of early American statesmen, elementary American and English histories, two or three of Dickens' novels complete, one of Cooper's, two or three of Scott's, abridged, three plays of Shakespeare's, Parkman's "California and Oregon Trail," and "Conspiracy of Pontiac," Whittier's and Lowell's poems, John Halifax, and Seton-Thompson's "Wild Animals I Have Known."

We mention these as some of the important parts of a familiar course and not as a complete one. It is more important that some course be pursued than that any given course should be marked out and chosen. In choosing books the best guide is the interest of the readers. It is also a necessary guide. It was pointed out many years ago, by Milton, I believe, that "where no delight is there is also no benefit."

As to the manner of conducting classes in literature, the simplest is the best. The teacher should present the master to the pupil, and let the master produce the effect. No time should be spent in long explanations, or in correction of mistakes—frequently every other minute is used in this way—which means every other hour, every other month, every other year, taken away from the influence of the master of thought and expression. The teacher should talk as little as possible, but as much as may be necessary. He should tell the pupil what is essential for his comprehension of the passage, but if he reads it intelligently, the teacher should say nothing. We frequently see schemes for the study of poems—Evangeline, for instance—which require an outline history of the countries concerned to be written, maps to be drawn, the life of the author, including his early environment, number of parents and relatives, his habitation and habits, effects of a codfish diet upon poetry, etc., to be noted by the learner.

Look into our own experience. How many books did we ever read with enjoyment and profit after this manner? A child undoubtedly would get some good, some inspiration from a view of Niagara Falls—just what, we cannot say. But if he were required to analyse his feelings and place a macron over those which partook of awe, a breve over those of fear, and a dieresis over those of pleasure, the results would not be heightened. There is an analysis which kills.

Just what the effects of literature upon the growing mind are we cannot say. We believe they are necessary and manifold. One which we have already noted is the development of the reconstructive imagination.

Another is the increase in the power of using the English language, both to obtain thought and to express one's own. Children after the reading of considerable literature were found to have greatly increased powers with their other studies, with history, language, geography and even with arithmetic, and to be able to write good English with greater facility.

But lastly, by far the best result of literature is the energizing and spiritualizing of the child's whole nature and setting it in the right direction, and this is better than the development of any special power. He comes in contact with the high and true ideals of the race, those that show the sweetness and power of the life of the spirit. He sees the splendor of devotion to duty, of the passion for truth, of the love of parents, of patriotism, so presented in literature as to impress him more vividly than reality itself.

This result is of inestimable value, and it is difficult to see how he can obtain it elsewhere—not in his daily life, not in the three R's as they are generally understood.

In answer to a question, Supt. Babcock added that, by taking half an hour a day, you could have seventy books read in a school life of eight years.

Prof. Kreemer asked if it was well to have newspapers used in the grammar grades. Out of 250 pupils questioned, 178 said they read the newspapers, and being asked what they read, it appeared they did not read the best things. Now we ought to teach them to read only the best—how are we to do it? Also how about magazines? I think proper development of the imagination will prevent our producing liars.

Supt. Jas. M. Coughlin, of Wilkesbarre, said he had observed that when a book is advertised by the press as a bad one, curiosity is excited and it is read a great deal. Good reading habits are not cultivated by skimming the newspapers. He believed the extensive use of biography was in the line of formation of character.

Miss Ermentrout: Our children when tested for what they regarded as the most important thing in the newspapers, decided on popular political questions.

HIGH SCHOOL AND GRAMMAR GRADE.

"How far should the demands of the High School govern the teaching in the Grammar Grades?" was the question treated in the following paper by Prof. Harvey M. Clymer, of Phœnixville:

The fairest gift of the 19th century to the 20th is the Free Public School. Like the individual the school presents a dualism, it is made up of a body and a soul. The body is the building and its equipment. Within this must be a living, intellectual, spiritual activity (the soul). A log hut with a skilful and intelligent teacher inside is a success; while a handsome structure and first-class equipment without a good teacher within is a failure. A good school system rests upon a suitable course of study. This course should be adapted to the needs of the children, should represent the most advanced ideas of education, and be practically fitted to the work of the school. Dr. Brooks, in one of his reports, made the statement that "a course of instruction in the public schools is never to be regarded as a finality in subjects or methods of teaching." With this statement the writer agrees.

The object of the school is two-fold, discipline and knowledge. Knowledge is the more readily tested by the unprofessional eye and is therefore the popular measure of school work. The educator gives a higher value to discipline than to acquisition. But he must require real knowledge on the part of the pupils of the public schools. He must especially require accurate knowledge within elementary limits of the so-called common branches.

To what extent the selection of the branches taught should be influenced by the requirements of the high school, is the question under discussion. "Should the subject be treated differently for the pupils who are going to enter college, for those who are going to a scientific school, and for those who presumably are going to neither?" was one of the pertinent questions submitted to the Committee of Ten. It was answered unanimously in the negative.

In treating this subject, the following questions present themselves: 1. Shall the same branches be taught to pupils who are going to enter the high school, to those are going to enter a business or trades school, and to those who are presumably going to neither? and 2. Shall the subjects be taught differently to those pupils who are going to enter the high school, and to those who are not?

The first question will no doubt cause difference of opinion, but the second can be answered with equal unanimity and in the same way as that propounded to the Committee of Ten, with an emphatic No.

Shall the same subjects be taught to all the pupils of the grammar grades irrespective of the pupil's future? Let us ascertain, if possible, what is being done. Is the elective system, so much in vogue now in the high school, practiced to any extent in the grammar grades? If so, what are the elective studies? In glancing over the course of instruction of a number of schools, I find that there is very little chance given for elective work before the High School. In a few cases Latin is elective in the grammar grades. In others either French or German, while in most cases all three are deferred until after the pupils enter the high school.

The discussion that has so long been going on in regard to the high school—as to whether it should prepare for college or should aim at a more practical education, leaving out some of the disciplinary studies required for college entrance and substituting those generally included in the first two years of a college course is not yet fully settled, and possibly never will be. But in the great majority of cases the latter course is pursued, while the college preparatory is optional and exceptional. This is based on the principle, "the greatest good to the greatest number," as by far the greater number of pupils never enter college.

Following the same analogy, the grammar school should aim to prepare the pupil as much as possible, for his life's work, or to enable him to get the most out of life, rather than for the high school. The majority of pupils never enter the high school, and to prepare pupils merely for that would omit from the school curriculum much interesting and helpful matter, on the supposition that it would be taught later on; while it might include something that could with profit be omitted by the pupil who cannot go beyond the grammar school, and some other study substituted for it. The teacher in the primary grade is not teaching the child to read from the first reader merely that he may be able to read from the second reader in the next grade, but that he may acquire the art of getting thought. So, though the grammar school course fits into the high school course, I would say that the high school supplements and completes the work of the grammar school, rather than that the grammar school course is influenced by the high school, making the grammar school the unit or center.

This is taking the conditions as we find them. Could we have ideal conditions and all the pupils enjoy the best possible, then we would have the grammar school course fit into and influenced entirely by the high school, the high school influenced by the college and the college guided by the university, making the university the unit.

The grammar school should complete the common branches. Thorough instruction should be given in reading, writing and arithmetic. Whatever else may be neglected these should be thoroughly taught, as they are the keys of knowledge and success in life. In arithmetic the object should be to broaden and strengthen the work of the previous grades, to teach pupils to think and to see accurately and to develop power to give continuous and concentrated attention to problems and their solution. Pupils should be acquainted with algebraic language and with concrete geometry. In geography, which enlarges his views and relates him to society and the world, he should have a course treating broadly of the earth and its inhabitants extending freely into fields which in later years are recognized to belong to separate sciences.

History, which by the experience of mankind affords him ideals of duty as an individual and a member of society, and civil government which enables him to appreciate his relation to the state, and his duties as a citizen should be thoroughly taught. These should be supplemented by current history. Book-keeping should be taught to such an extent as to give pupils a knowledge of business papers, notes, checks, drafts, bills, etc., and the ability to keep accounts by single entry.

Added to these, there should be language, including literature, which trains the pupil to

logical forms of thought and accuracy and facility of expression; practical drawing, which prepares for mechanical employment; singing, which affords pleasure and moral culture. In everything train to habits of attention, concentration, accuracy, self-reliance and those qualities that go to make up Christian manhood and womanhood. Then the pupil will be fitted for citizenship and the successful pursuit of his or her life-work.

Miss Ermentrout remarked that each one has his own opinion as to whether the grammar school does or does not prepare for the high school.

(Supt. R. T. Adams, of Lebanon, who was to discuss this paper, was so prostrated by the heat that he was taken to the Hahnemann Hospital for treatment, where he slowly recovered.)

Supt. Coughlin said we often think and speak as if preparation for college were the only business of the high school. But a suitable preparatory course does not lose its value if the pupil does not go to college. It is broadening, and he believed in the broadest and highest culture for the greatest number. In '91 a class of thirteen graduated, and on inquiry he found that ninety-three had begun the course three years before. A three years' course of broad, comprehensive study for all would have been best in the end, in his judgment, even if none had graduated. We must begin at the bottom, but must look up toward the top, which is the college. We are apt to think too much backward, when we need a forward look. What studies, if any, should be taken from the high school and put into the grammar course? As things are, we can hardly eliminate anything from the grammar school. We do not want electives at this point—the place for that is the university, where you are supposed to take up just whatever you please. Yet in some college catalogues we can hardly find the course on account of the multitude of electives. Some even rule out English history. Now there are some things that *must* be studied, and we must be preparing for them. We hear often of a great gap, real or imaginary, between grammar and high school—of a tendency to have a sort of intellectual aristocracy in the high school. It is hard to see why there should be any more of this at this point than between any other two grades; and of course there should be none of it anywhere. In some courses there is no doubt too radical change between grammar and high school, and some pupils become discouraged, drop out and seek other employment; but if the teachers in the grammar grade could take, say, part of the first year's high school work, the gap might be bridged over, and more of the pupils would stay with us. Of course the work must be largely disciplinary, and a solid foundation should be laid in the important branches; but he thought after all if the whole course pointed to and was focused upon a higher education, it would be best for every child in every grade of school.

Supt. Jos. K. Gotwals, of Norristown, read the following paper on

THE INTRODUCTION OF THE HIGHER BRANCHES INTO GRADES BELOW HIGH SCHOOL.

Before we attempt to discuss this subject it may be well to have some idea in regard to the time a pupil is expected to spend in school before entering the high school.

In examining different courses of study we find time spent to differ in different sections. It varies from seven to nine years. We would not expect to complete the same amount of work in a seven years' course as in a nine years' course. Taking the eight years' course as our basis the question before us is, Shall we introduce Geometry, Latin, German and Algebra into the eighth year, or below the high school?

Before giving an opinion on this allow me to call your attention to a discovery made by the Superintendent of Public Instruction of New York at a recent examination in the Normal College for professional certificates. Of the Freshmen that tried English about fifty per cent. failed; of the Sophomores that tried mathematics about eighty per cent.; of Seniors who failed, 75 per cent. It is stated that this is a remarkable showing. We think it is. It must be remembered that the pupils of this college are supposed already to have had, at their entrance, a good common school education. This incident is commented upon by stating that there is a strong tendency in our public teaching to ignore the fundamental branches and to hurry pupils into the miscalled higher grades. What must have been the previous instruction of these persons? At what pace may they have been rushed through the lower classes? Does the above apply to the students who leave our schools for higher institutions? Have we not often been mortified at the showing made by too many boys and girls in advanced classes when brought to the test? Can anything be accomplished by the introduction of the higher branches?

I have here a course of study adopted by a school board in our borough in 1836:

Grade No. 1. Boys' Primary department—Alphabet, spelling, reading, writing and the rudiments of geography.

No. 2. Boys' Secondary—Reading, spelling, writing, geography, arithmetic, as far as vulgar fractions and decimals.

No. 3. Boys' High School—Reading, English grammar, geography, writing, drawing maps, use of globes, finish vulgar fractions, book-keep-

ing, history, elements of natural philosophy, first book of Euclid, trigonometry, surveying, algebra, elements of astronomy and chemistry.

No. 1. Girls' Primary—Alphabet, spelling, reading and writing.

No. 2. Girls' Secondary—Reading, writing, mental arithmetic, first four rules of arithmetic or complete an elementary arithmetic, needle-work.

No. 3. Girls' High School—Same as boys with exception that geometry, surveying, and trigonometry are omitted. It also includes ornamental and plain needle-work.

A glance at the above will show us what was considered a school course shortly after the adoption of the public school law. It will not be necessary for me to make a comparison with what is introduced into our present course. Any one going over the different subjects will find this a pretty good array for a child to complete in the first eight years of school life.

The school law lays down for us the branches to which the attention of every child is expected to be called, and in which it is expected to be instructed. Hence it is our duty to see that, so far as we can, we give all an opportunity to become proficient in them.

We are often met with the remark, "You have too many studies in your schools." "My child is asked to do too much, to study that which is beyond its comprehension." The question arises can anything be eliminated? Surely not any of the common branches, but let us be careful about the addition of higher branches. If it can be shown that the pupil has so mastered the required studies and is ready for these higher branches let him take them up; but it seems to me that for us to say that these higher branches must be taught in the lower grades is a mistake.

So far as Latin will help him to get a better acquaintance with the English let it be taught. A four years' course in the high school is time enough for this branch. It is conceded by most Latin teachers, if not by all, that a child well grounded in the principles of English grammar will make much more rapid progress in the study of an ancient or a modern language than one who is deficient in the construction of the English sentence.

In this eighth year's course care should be taken that we do not overcrowd the pupil with additional or new branches. Here a special opportunity is afforded for a general review of what was previously taught. The mind of the child has developed to such an extent as to be able to digest some of the subjects attempted to be taught at an earlier age. Geography, grammar, history and arithmetic can now be treated so as to be comprehended better than it could have been done at an earlier age of the child. Here a fair knowledge of grammar can be obtained, which will do away with the complaint so frequently made by teachers of ancient and modern languages, that our pupils are deficient in this branch.

Geometry should not be introduced into this grade as a special study. Measurements necessary for pupils of this age can be taught without a drill in geometrical demonstration. These measurements are treated sufficiently in all arithmetics to give a child something of which he can make good practical use. Let the geometrical demonstrations be deferred until he is admitted into the high school. As to the introduction of Algebra, I think it can be introduced into the eighth year of the course with profit. Here I would teach only the first principles under the fundamental rules. These can be so taught as to aid in impressing some of the operations of Arithmetic and assist in grasping some of its principles.

Shall we introduce German into the lower grades? I answer this in the negative. We have not time to give it the attention it would demand to make it of any profit to the pupils. The pupil can get to know of it all that is necessary for him to know in the few years he spends in the high school.

Prof. Kreemer made a motion, which was adopted, that the chairman should propose the appointment of a committee of the Association to report next year as to what literature work is done in the grammar grades outside of text-books.

The motion was agreed to, and the matter was communicated to the Secretary of the Association, but in the press of business during the last hours no action was taken.

THE VOLUME MAILED.

THE volume of Proceedings, containing the full report of the sessions of the State Educational Association, the Round Table Conferences, the annual meeting of the City and Borough Superintendents, and the annual meeting of the Directors' State Association, was mailed August 14th. It includes, of course, the Nature Study Conference, which is the only one held over here until our next number; and the portrait and biographical sketch of Hon. Samuel Breck who wrote the School Law of 1834. Twenty-five hundred copies have been printed. It has been sent to all members enrolled, to all State Superintendents of Schools, to members of the Directors' Convention, to the college libraries of the State, and to some other parties. Dr. Edward Brooks kindly agreed to have the large Philadelphia list distributed free of cost to the Association, and six large boxes of books were shipped to his care when the rest were put into the mails. Some two hundred or more copies are left, which may be had from the Secretary, at one dollar each, by those desiring them. Address J. P. McCaskey, Lancaster, Pa.

Earth's crammed with heaven,
And every bush aflame with God,
But only he who sees takes off his shoes.
—*Lowell.*

OFFICIAL DEPARTMENT.

DEPARTMENT OF PUBLIC INSTRUCTION,
HARRISBURG, September, 1901.

THE appropriations made and the new legislation enacted by the last Legislature will mark an epoch in the educational history of Pennsylvania.

Four hundred thousand dollars were appropriated to make the tuition free in our State Normal Schools. One dollar and fifty cents is allowed for the full payment of the tuition of students who are seventeen years of age and who sign a promise to teach two years in the public schools of Pennsylvania. The Act making this appropriation assumes that seventeen years is the age at which students reach sufficient maturity to pursue professional studies. Students who have not reached the age of seventeen must pay their tuition at the State Normal schools.

The Legislature also set apart fifty thousand dollars to aid in the establishment and maintenance of township high schools. It is not as much as the friends of the high school hoped to get. It may seem unjust that no aid is given to high schools in boroughs and cities. Fortunately high schools have been established in all the cities and in nearly all the boroughs. The appropriation is designed to reach pupils in rural districts. Many of these, after they get their education in the township high school, go to the larger centres of population; and in this way the cities and larger boroughs indirectly get the benefit of this appropriation through the increased intelligence of the young people who move away from the country. In agricultural districts the increased knowledge of the laws and forces of nature which a rural high school may reasonably be expected to impart, will enable the future farmers to put brains as well as toil into the soil, and thus enhance the welfare and prosperity of our rural population. The acquisition of proper methods of studying plant growth and the insects which are hurtful to our crops, will mean much in the future development of agriculture and horticulture.

It is to be regretted that the state revenues made it necessary for the governor to diminish the special appropriations to the three State Normal schools at Clarion, Edinboro and East Stroudsburg, and Grove City College, and to the hospitals of our medical colleges. The governor had an unpleasant duty to perform, but he did it conscientiously and fearlessly.

Our school system is at length firmly planted upon the doctrine that a teacher should know more than he is required to teach. After the first Monday of June, 1902, no teacher shall receive from a county, city or borough superintendent "a certificate as a teacher who has not a fair knowledge of orthography, reading, writing, geography, English grammar, mental and written arithmetic, history of the United States, the theory of teaching, and civil government, including state and local, and elementary algebra." In this enumeration the last two branches are the new branches in which all teachers must be examined if they do not hold permanent certificates. The holders of permanent certificates can continue to teach, without further examination, the branches named on their certificate. The examinations for permanent certificates which will be conducted in 1902, will include civil government and elementary algebra.

This new law should not be administered so as to prove a hardship to skilful teachers who are now engaged in teaching. The law does mean that teachers must continue to grow in knowledge, but an entire year is still ahead during which teachers can prepare for the examination in elementary algebra and civil government. Those who cannot make the required preparation at home or by availing themselves of the free tuition now offered at our Normal schools, will find ample opportunities for study in the summer schools at Mt. Gretna and other delightful summer resorts in picturesque Pennsylvania.

It does not follow that algebra and civil government must be taught in every school or be studied by every pupil, as was the case with physiology when that study was added to the list of common school branches. In Pennsylvania no one is permitted to teach in the public schools branches not named on his or her certificate. From this provision it cannot be logically inferred that every teacher is expected to teach all the branches named on the certificate. For years the

teachers in primary schools have been compelled to pass examinations in branches which they did not teach. Our law-makers are gradually assuming that a teacher needs culture, that this culture cannot come from a mere knowledge of the ordinary English branches, that teachers must know more than they are required to teach if the time and effort of the pupil is not to be wasted by undue emphasis upon topics of minor importance. Many a pupil is sacrificed to the Moloch of thoroughness by teachers who know only a few branches thoroughly and exhaustively. The degree of thoroughness that should be required for promotion is adequate preparation to do the work laid down in the next grade. A teacher ignorant of high school branches may waste time upon non essentials in English grammar and arithmetic, and upon difficulties which are easily grasped after the secondary schools are reached.

Maryland requires an examination in algebra, geometry, elements of physics and civil government from all teachers in ungraded schools. Pennsylvania is simply falling into line in the forward movement inaugurated by her sister states. The lengthening of the Normal School course to three years is another step in the right direction. The twentieth century demands more of the individual than the nineteenth. He who would not fall out of the ranks must keep up with the procession. The schools exist, not for the sake of giving employment and a livelihood to teachers, but to fit boys and girls for the duties which the new century will force upon them. It is a patriotic duty to fit our young people to take a deeper interest in civil and municipal government. They need a more intimate acquaintance with the details of government; they must be taught to watch the expenditure of public money, if taxation is not to grow as excessive as it has become in European countries. Moreover, the pupil should be furnished with all the helps to effective thinking that modern life affords. The man who can think in symbols gets better pay than the man who can only put thought into the things which he sees and handles. Familiarity with the methods of algebraic thinking will enable the pupil to grasp the symbolic language of other sciences, and thus help to fit him for an age in which electricity is destined not only to light our houses, cook our food, draw our vehicles, but also to revolutionize every sphere of human activity. Onward is the watchword of the new century, and it is only through progress on the part of the teachers that the demands of the future can be met by our schools.

CIRCULAR LETTER TO COUNTY SUPERINTENDENTS.

DEPARTMENT OF PUBLIC INSTRUCTION,
Harrisburg, Pa., July 25th, 1901.

DEAR SIR: I herewith send you some copies of a circuiar containing the clause in the General Appropriation which sets apart $50,000 to aid township high schools. The method of distributing the appropriation is fixed by the Act of June 28, 1895. In addition to its share of this special appropriation, a township establishing and maintaining a high school is also entitled to upwards of fifty dollars for every teacher regularly employed for the year in said high school. Please draw the attention of directors to this fact in case you think it feasible and advisable to start a high school in their township. It would, of course, be a fatal mistake to start high schools where they can not be maintained either from lack of pupils, or public sentiment, or the necessary resources.

A high school can be started in any ordinary school room. The most difficult thing to secure is an instructor of the requisite scholarship and teaching ability. Graduates of the Elementary Course in our Normal Schools do not possess the scholarship required by law. Most of those who have completed the three years' course or the Scientific course, or who have received the permanent certificate on the basis of graduation from College, possess the certificate required by the Act of 1895. A provisional certificate covering the branches not enumerated on the Permanent or Normal School Certificate, will entitle the holder to be employed as the teacher whose scholarship is specified by the Act of 1895. The requirements should not be made too rigid at first. For instance, the chapters on Insects in the text-books on Zoölogy will satisfy the law on the subject of entomology, and the same construction should apply to other requirements. More rigid demands on the score of scholarship can be made as soon as the new three years' course in our State Normal Schools has been put into successful operation.

If you desire me to assist you in any way in the establishment of any township high school, I shall be glad to render any assistance in my power. I am aware that we can not move faster than public opinion, and am anxious on the one hand to establish township high schools where they are likely to succeed, and on the other hand to

avoid making the experiment in townships where a high school can not succeed. I will be glad to hear from you in reply.

Very sincerely,

NATHAN C. SCHAEFFER,
State Supt. Public Instruction.

TOWNSHIP HIGH SCHOOLS.

THE Act which appropriates $11,000,000 for the support of the public schools during the two years beginning June, 1901, and ending June, 1903, contains the following clause:

"Out of the said amount hereby appropriated (the eleven million dollars appropriated for the support of the public schools) there shall be set apart the sum of fifty thousand dollars to be expended on the warrants of the Superintendent of Public Instruction for the encouragement and support of township high schools: *Provided*, That participation in the amount hereby appropriated for the encouragement and support of township high schools shall not be made dependent upon the teaching of any dead or foreign language."

The Act of June 28, 1895, divides high schools into three classes, specifies the basis upon which money appropriated in aid of high schools shall be distributed, and prescribes the scholarship of at least one of the teachers to be employed in a high school receiving State aid:

"A high school maintaining four years of study beyond the branches of learning prescribed to be taught in the common schools and called the common branches shall be known as a high school of the first grade; a high school maintaining three years of study beyond the common branches shall be known as a high school of the second grade; a high school maintaining two years of study beyond the common branches shall be known as a high school of the third grade: *Provided*, That the reviews necessary for the prosecution of high school studies shall not be excluded from the estimate of the year's study beyond the common branches.

"From the annual appropriations in aid of high schools, a high school of the first grade shall each year receive a sum not exceeding eight hundred dollars, a high school of the second grade a sum not exceeding six hundred dollars, a high school of the third grade a sum not exceeding four hundred dollars. If the appropriation is insufficient to pay the above amounts to the several high schools, then the appropriation shall be distributed to the schools of the respective grades in such a manner that each school shall receive a sum proportional to the number of years of advanced study maintained in its course or courses of instruction: *Provided*, That any high school established at the fall opening of the school year beginning on the first Monday of June, one thousand eight hundred and ninety-five, shall be paid at end of the year as a high school of third grade.

"The directors or controllers of every district receiving aid in accordance with section four of this act, shall employ for said high school at least one teacher legally certified to teach bookkeeping, civics, general history, algebra, geometry, trigonometry, including plane surveying, rhetoric, English literature, Latin, including Cæsar, Virgil and Cicero, and the elements of physics, chemistry, including the chemistry of soils, botany, geology and zoölogy, including entomology, and no teacher shall be employed to teach any branch or branches of learning other than those enumerated in his or her certificate."

A high school cannot be created by a mere resolution of the school board, or by outlining a course of study, or by the payment of a higher salary than that which other teachers receive, or by the erection of a school building more costly than the buildings occupied by the elementary schools, or by a glowing report to the Department of Public Instruction. Above all else, a high school requires a sufficient number of pupils prepared to pursue studies beyond the common branches, and an instructor having the requisite scholarship and teaching ability. A high school teacher should know far more than he is required to teach; otherwise he cannot inspire pupils with a thirst for knowledge and a sense of something to be achieved. An instructor who knows only what he is required to teach, is constantly in danger of neglecting to drill upon the things essential for advanced study, and of wasting time upon topics of minor importance. The appropriation in aid of township high schools is designed to assist directors in the employment of teachers possessing a sufficient knowledge of science to make pupils take an interest in the laws and forces of nature, and in the wonderful phenomena which are to be seen on the farm, in the garden, and in the forest. Moreover, a high school course should prepare the pupil to think the best thoughts of the best men and to enjoy the things of the mind and the higher life.

No violent or sudden changes in the course of study are recommended for high schools now in successful operation. The appropriation will be paid to any township high school which employs at least one teacher of the required scholarship and gives instruction beyond the common branches. The following course of study is recommended for high schools established in the fall of 1901.

HIGH SCHOOL COURSE.—*First Year:*

1. Mathematics—Elementary Algebra.
2. Science—Physical Geography, including the nature and formation of soils.
3. Civics—The Civil Government of the United States and Pennsylvania.
4. English—Composition and Rhetoric, alternating with English Classics.
5. Optional—Bookkeeping and Drawing, or beginning Latin.

Second Year:

1. Mathematics—Elementary Algebra and Plane Geometry.
2. Science—Lessons in Botany and Zoölogy. Instruction on plants, insects, etc., to be suited to the locality and the season of the year.
3. History—History of England. Special attention to points of contact between English and American History.
4. English—Composition and Rhetoric, alternating with English Classics.
5. Optional—Double Entry Bookkeeping and Drawing, or Cæsar and Latin Prose.

Third Year:

1. Mathematics—Plane and Solid Geometry.

2. Science—Elements of Physics.
3. History—General History.
4. English—Composition and English Literature, with Review of English Grammar.
5. Optional—Cicero and Latin Prose, or Reviews of Common Branches.

Fourth Year:

1. Mathematics—Algebra and Geometry, including mensuration of surfaces and solids.
2. Science—Elements of Chemistry, with special reference to the Science of Agriculture.
3. History—General History and Review of American History.
4. English—Composition and English Literature, with some reference to its development and history.
5. Optional—Virgil, or Commercial Arithmetic and Commercial Geography.

A high school which can employ but one teacher should not attempt more than the first two years of the course, and should be content to rank as a high school of the third class until its teaching force and other facilities can be increased. By giving five half-hour periods to recitations by each class in a high school of the third grade, the teacher will still have an hour at his disposal for recesses, reviews, music and other exercises not specified in the foregoing curriculum. Thus time can be found for instruction in physiology and hygiene, or in any other branch required by local needs. If it is deemed advisable, the recitation periods can be lengthened by reducing the weekly number of recitations in mathematics or history or science from five to four. Elocutionary exercises can be given in connection with the study of the English Classics. The nature and formation of soils can be taught in connection with physical geography. If one of the more difficult of the recent text-books on physical geography is adopted, it may be wise to postpone this study to the last year of the high school and to begin with the elements of one of the other sciences. Any science may be studied in two ways, (1) in its elements, making it a suitable discipline for pupils in secondary schools, and (2) by the advanced methods of the college and university, making the subject too difficult for the high school. A good teacher can begin with any science and communicate knowledge which will serve as proper mental aliment for the first year in a high school.

For the vast majority of those who attend rural schools the high school will be a finishing school. The high school must not ignore their needs or neglect their preparation for subsequent life. On the other hand, many of the best students at our colleges and universities come from rural schools. On the farm there is nothing so valuable as mind. The farmers' sons and daughters should have an opportunity to make the most of the talents by which they have been endowed. Hence, it would be a fatal policy to exclude from the township high school the studies which help to fit for admission into colleges and professional schools. In so far as the resources of a high school permit, the studies of specially gifted pupils should be so shaped as to fit them for the institution of higher learning which they desire to enter. In some cases it is wise to substitute a modern language for Latin.

High schools are not professional schools. They should not be converted into training schools for teachers. The thoroughness in the common branches, which is justly required of those who desire to teach, involves a waste of time for the great majority who enter other vocations, and imposes an unnecessary burden upon the taxpayer in view of the fact that the State annually spends hundreds of thousands of dollars upon schools specially designed for the training of teachers. It is only the larger cities which can afford to establish and maintain special schools and courses for the training of teachers. In township high schools such special courses are out of place, and involve a waste of school money. Nevertheless, the law for high schools makes provision for necessary reviews of the common branches. It is natural to forget. Instead of finding fault with the lower grades, the competent teacher gives reviews of what has been forgotten or imperfectly understood, and thereby prepares pupils to grasp the instruction in more advanced studies. Reviews of this sort are needed in every school, and it may be wise at times to devote to exercises of this kind one or more periods a day for several days or even weeks in succession.

NATHAN C. SCHAEFFER,
State Supt. Public Instruction.

Harrisburg, July 24, 1901.

PRIZE ESSAYS BY TEACHERS.

ANNOUNCEMENT.

THE Trustees of the University of Pennsylvania offer prizes of two hundred and fifty dollars ($250) each: one for the best essay upon "The Advantages which Accrue from a Classical Education," and the other for a similar essay upon "The Scope and Importance of the Work of Scientific Museums."

These prizes are to be competed for only by teachers of Public High Schools in the State of Pennsylvania. The announcement of the successful competitors, and the award of the prizes, will be made at the University Commencement to be held June 18, 1902. The rules governing this competition are as follows:

1. No prize will be awarded unless, in the judgment of the three professors appointed for that purpose, the work done for it reaches a high standard of excellence.
2. All Essays in competition for these prizes must be handed to the Dean of the College, Dr. J. H. Penniman, on or before May 1, 1902; must be signed by a fictitious name, and be accompanied by a sealed envelope, on which is written the fictitious name, and in which is enclosed the writer's real name and address.
3. Essays submitted for the prizes must be type-written, and the University shall have the right to print the winning Essays, over the name of the author, if it be deemed desirable.
4. Essays failing to receive a prize will be returned to the writers if they so request.

CHAS. C. HARRISON, *Provost.*

July 29, 1901.

COUNTY AND CITY INSTITUTES.

THE places and dates for the approaching sessions of the County, City and Borough Institutes are given herewith:

Allegheny	Pittsburgh	Aug. 26.
Armstrong	Kittanning	Oct. 7.
Bradford	Towanda	Oct. 7.
Crawford	Meadville	Oct. 7.
Cameron	Emporium	Oct. 14.
Erie	Erie City	Oct. 14.
Greene	Waynesburg	Oct. 14.
Lawrence	New Castle	Oct. 14.
Lehigh	Allentown	Oct. 14.
Potter	Coudersport	Oct. 14.
Berks	Reading	Oct. 21.
Luzerne	Wilkes-Barre	Oct. 21.
McKean	Smethport	Oct. 21.
Montgomery	Norristown	Oct. 21.
Susquehanna	Montrose	Oct. 21.
Bucks	Doylestown	Oct. 28.
Chester	West Chester	Oct. 28.
Dauphin	Harrisburg	Oct. 28.
Delaware	Media	Oct. 28.
Lackawanna	Scranton	Oct. 28.
Lebanon	Lebanon	Oct. 28.
Northampton	Easton	Oct. 28.
Tioga	Wellsboro	Nov. 4.
Huntingdon	Huntingdon	Nov. 11.
Lancaster	Lancaster	Nov. 11.
Mercer	Mercer	Nov. 11.
Monroe	Stroudsburg	Nov. 11.
Wayne	Honesdale	Nov. 11.
Cambria	Ebensburg	Nov. 18.
Columbia	Bloomsburg	Nov. 18.
Franklin	Chambersburg	Nov. 18.
Fulton	McConnellsburg	Nov. 18.
Montour	Danville	Nov. 18.
Adams	Gettysburg	Nov. 25.
Juniata	Mifflintown	Nov. 25.
Mifflin	Lewistown	Nov. 25.
Snyder	Middleburg	Nov. 25.
Somerset	Somerset	Nov. 25.
York	York	Nov. 25.
Carbon	Mauch Chunk	Dec. 2.
Cumberland	Carlisle	Dec. 2.
Elk	Ridgway	Dec. 2.
Perry	New Bloomfield	Dec. 2.
Schuylkill	Pottsville	Dec. 2.
Centre	Bellefonte	Dec. 9.
Pike	Milford	Dec. 9.
Bedford	Bedford	Dec. 16.
Blair	Hollidaysburg	Dec. 16.
Butler	Butler	Dec. 16.
Clearfield	Clearfield	Dec. 16.
Clinton	Lock Haven	Dec. 16.
Fayette	Uniontown	Dec. 16.
Forest	Marienville	Dec. 16.
Jefferson	Brookville	Dec. 16.
Lycoming	Muncy	Dec. 16.
Northumberland	Sunbury	Dec. 16.
Warren	Warren	Dec. 16.
Washington	Washington	Dec. 16.
Westmoreland	Greensburg	Dec. 16.
Clarion	Clarion	Dec. 23.
Indiana	Indiana	Dec. 23.
Venango	Franklin	Dec. 23.
Beaver	Beaver	Dec. 30.
Sullivan	Dushore	Dec. 30.
Union	Lewisburg	Dec. 30.
Wyoming	Tunkhannock	Dec. 30.

CITY ANNUAL INSTITUTES.

Williamsport	Aug. 26,	1901.
Altoona	Sept. 2,	"
Allentown	Sept. 2,	"
Harrisburg	Sept. 2,	"
Reading, Girls' H. Sch	Sept. 2,	"
Wilkes-Barre	Sept. 2,	"
Johnstown	Oct. 28,	"
McKeesport	Nov. 25,	"
Carbondale	Dec. 2,	"
Chester City	Mch. 31,	1902.
Lancaster City	Mch. 31,	"
Hazelton	April 7,	"

COLLEGE GRADUATE CERTIFICATES.

THE following State Teachers' Certificates have been issued to college graduates:

758. Emma Miller Bolenius, Lancaster, Lancaster county, Bucknell University, A. B., issued June 20, 1901.

759. Levi H. Scheetz, Lynnport, Lehigh county, Franklin and Marshall College, A. B., issued June 20, 1901.

760. Frederick V. Emerson, Tillotson, Crawford county, Colgate University, A. B., issued June 20, 1901.

761. Elizabeth Duncan, Mount Pleasant, Westmoreland county, Westminster College, A. B., issued June 20, 1901.

762. Frank A. Barkley, Prospect, Butler county, Grove City College, Ph. B., issued June 20, 1901.

763. David L. Headles, Mt. Morris, Greene county, Waynesburg College, A. B., issued June 20, 1901.

764. Frank W. Crawford, Greensburg, Westmoreland county, Grove City College, Ph. B., issued June 20, 1901.

765. S. H. Gardner, Merwin, Westmoreland county, Grove City College, A. B., issued June 20, 1901.

766. J. Elwood Wherry, South Bend, Armstrong county, Grove City College, A. B., issued June 20, 1901.

767. H. E. Winner. Sandy Lake, Mercer county, Grove City College, Ph. B., issued June 20, 1901.

768. W. P. Fetherolf, Kempton, Berks county, Muhlenberg College, A. B., issued July 8, 1901.

769. D. M. Oyer, Upper Strasburg, Franklin county, Lebanon Valley College, A. B., issued July 8, 1901.

770. Mary E. Dickson, Clark, Mercer county, Grove City College, Ph. B., issued July 8, 1901.

771. Melissa M. McBride, Atlantic, Crawford county, Westminster College, B. S., issued July 8, 1901.

772. John H. Bortz, Mutual, Westmoreland county, Franklin and Marshall College, A. B., issued July 8, 1901.

773. James M. Fetherolf, Kempton, Berks county, Muhlenberg College, A. B., issued July 8, 1901.

774. Cleo E. Putnam, North East, Erie county, Grove City College, A. B., issued July 8, 1901.

775. Charles M. McLaughlin, Markle, Westmoreland county, Grove City College, B. S., issued July 8, 1901.

776. M. Evelyn Hammond, New Concord, Ohio, Muskingum College, B. S., issued July 8, 1901.

777. Irvin N. Salisbury, Centre Road Station, Crawford county, Allegheny College, B. S., issued July 15, 1901.

778. Henry Wolf Willier, Collegeville, Montgomery county, Ursinus College, A. B., issued July 15, 1901.

779. H. H. Broad, Transfer, Mercer county, Grove City College, Ph. B., issued July 15, 1901.

780. John A. Shofer, East Greenville, Montgomery county, Muhlenberg College, A. B., issued July 15, 1901.

781. H. J. McElhoes, Home, Indiana county, Grove City College, Ph. B., issued July 15, 1901.

RECENT SCHOOL LEGISLATION.

REVISED COMPULSORY SCHOOL LAW.

AN ACT to provide for the attendance, and for reports of attendance, of the children in the schools of this Commonwealth; for the enumeration of the children for that purpose, and providing compensation for the persons making such enumeration; for the appointment of attendance officers, defining their powers and duties, and providing for their compensation; for giving the boards of school controllers, where they exist, or school directors under certain conditions, power to designate the school to which pupils offending under this act shall be sent; for the establishment and maintenance of special schools; defining truancy and incorrigibility as disorderly conduct, and providing penalties for the same; and providing for the disposition of truant and incorrigible children; and providing penalties for the violation of any provisions of this act; and providing for reports of employers of children; and withholding a part of the State appropriation from school districts not enforcing this act; and for the repeal of the compulsory acts of May sixteen, one thousand eight hundred and ninety-five, and July twelfth, one thousand eight hundred and ninety-seven, and all other acts or parts of acts inconsistent herewith.

Section 1. Be it enacted, &c., that every parent, guardian or other person in this Commonwealth, having control or charge of a child or children between the ages of eight and sixteen years, shall be required to send such child or children to a day school in which the common English branches are taught, and such child or children shall attend such school continuously during the entire time in which the public school in their respective districts shall be in session, unless such child or children shall be excused from such attendance by the board of the school district in which the parent, guardian or other person resides, upon the presentation to said board of satisfactory evidence showing such child or children are prevented from attendance upon school or application to study by mental, physical or other urgent reasons. But the term urgent reasons shall be strictly construed, and shall not permit of irregular attendance: Provided, That the school board in each district shall have power, at its June meeting, to reduce the period of compulsory attendance to not less than seventy per centum (70 per centum) of the school term in such district, in which case the board must, at that date, fix the time for compulsory attendance to begin. This act shall not apply to any child between the ages of thirteen and sixteen years who can read and write the English language intelligently, and is regularly engaged in any useful employment or service: Provided, That in case there be no public school in session within two miles, by the nearest traveled road, or any person within the school district, he or she shall not be liable to the provisions of this act: Provided, That this act shall not apply to any child that has been or is being otherwise instructed in English, in the common branches of learning for a like period of time, by any legally qualified governess or private teacher in a family: And provided further, That any teacher or principal of any private school or educational institution shall report non-attendance, as provided in section five (5) of this act: Provided further, That any person employing a child or children shall furnish, on or before the third Monday of the school term and quarterly thereafter, to the superintendent of schools, to the secretary of the board of school directors or controllers of the district in which such child or children reside, the names, age, place of residence, and name of parent or guardian of every person under the age of sixteen years in his employ at the time of said report: And provided also, That the certificate of any principal or teacher of a private school, or of any institution for the education of children, in which the common English branches are taught, setting forth that the work of said school is in compliance with the provisions of this act, shall be sufficient and satisfactory evidence thereof, and the principal or teacher of said school or institution shall have the power to excuse any child or children for non-attendance during temporary periods, in accordance with the provisions of this act.

Sec. 2. For every neglect of duty imposed by the first section of this act, the principal or teacher, or person in parental relation, offending, shall be guilty of a misdemeanor, and shall upon conviction thereof before a justice of the peace, magistrate or alderman, forfeit a fine not exceeding two dollars on first conviction, and a fine not exceeding five dollars for each subsequent conviction; and in default of payment of said fine, the defendant may be committed to the county prison for a period not exceeding two days for the first conviction, and for a period not exceeding five days for each subsequent conviction: Provided, Upon conviction, the defendant or defendants may appeal to the court of quarter sessions of the peace of the proper county, within five days, upon entering into recognizance with one surety for the amount of fines and costs: Provided, however, That before such penalty shall be incurred, the parent, guardian or other person liable therefor shall be notified in writing by the superintendent of schools, or the secretary of the school board, or by the attendance officer, if there be one, of such liability, and shall have opportunity, by compliance with the requirements of this act, within three school days, then and thereafter, to avoid the imposition of such penalty. But after such notice has been served, if the same child is absent from school three days, or their equivalent in time, during the remaining period of compulsory attendance, without excuse as provided by section one (1) of this act, the parent, guardian,

or person in parental relation, shall be liable to prosecution under this act, without further notice. The fines provided for by this act shall, when collected, be paid over by the officers collecting the same into the school treasury of the respective districts, for the use of the said school district of the city, borough or township in which such person convicted resides, to be applied and accounted for by such treasurers in the same way as other moneys raised for school purposes; such fines shall be collected by a process of law similar to the collection of other fines.

Sec. 3. Board of school directors or school controllers shall in cities, and may in all other school districts, employ one or more persons to be known as attendance officers, who shall, in addition to the duties provided elsewhere in this act, have full police power without warrant, and whose duty it shall be to look after and arrest and apprehend truants and others who fail to attend school in accordance with the provisions of this act. When an attendance officer arrests or apprehends any truant or other person, as herein set forth, he shall have power, immediately to place him or her in the school in which he or she is or should be enrolled, or at the expense of the parent, guardian or person in parental relation, in such private school, as provided by section one (1) of this act, as the parent, guardian or person in parental relation may select. And in case the parent guardian or person in parental relation shall refuse or neglect, immediately to select such school, the school board or board of school controllers shall have full power to designate the school in which the child shall be placed. The persons appointed such attendance officers shall be entitled to such compensation as shall be fixed by the boards appointing them, but in townships, shall not exceed two dollars per day; and such compensation may be paid out of the school fund. Boards of directors or controllers of any school district, or of two or more districts jointly may establish special schools for children who are habitual truants, or who are insubordinate or disorderly during their attendance upon instruction in the public schools, and may provide for the proper care, maintenance and instruction of such children in such schools, for such period of time as the board may prescribe. But before the pupil shall be placed in such special school, the parent, guardian or person in parental relation shall have opportunity to be heard. All truancy and incorrigibility shall be deemed disorderly conduct. And in case no special school, as herein prescribed, has been established, the superintendent of schools or secretary, or attendance officer if there be one, shall proceed against such truant or incorrigible pupil as a disorderly person, before a justice of the peace, magistrate or alderman, and upon conviction the pupil may be sentenced to any special or reformatory school supported wholly or in part by the State, or at the option of the school board or board of controllers, be committed to the care of a society, duly incorporated, having for one of its objects the protection of children from cruelty or the placing of children, not otherwise provided for, in families; and in case of a commitment of a child or children to the care of such society, the board of directors or controllers of the district may provide for the expense of the maintenance and education of such child or children out of that part of the school fund within its control which shall have been appropriated to said board by the local authorities of such district.

Sec. 4. It shall be the duty of the assessors of voters of every district, when not notified and directed to the contrary by the school board, at the spring registration of voters or as soon as possible thereafter, to make, in a substantial book, provided by the Superintendent of Public Instruction at the expense of the State, for that purpose, a careful and correct list of all children between the ages of six and sixteen within his district, giving the full name, date of birth, age, sex, nationality; residence, sub-school district, name and address of parent or person in parental relation, and the name and location of the school where the child is enrolled, or the cause of non-enrollment, and the name and address of the employer of any child under sixteen years of age that is engaged in any regular employment or service; which enumeration, after approval by the secretary of the said school district, shall be returned by the said assessor to the county commissioners of the county in which the enumeration is made, whose duty it shall be to forward the same, or a certified copy thereof, to the secretary of the proper school district, prior to July fifteenth of each year, who shall immediately furnish the principal or teacher of each school with a correct list of all children in his or her district who are subject to the provisions of this act; and the said county commissioners shall furnish a summary of such statistics to the Superintendent of Public Instruction, upon blanks provided by the State. And the said assessor shall be paid, out of the county funds, a per diem compensation for their services, a sum equal to the compensation paid under existing laws for assessors of election; said services not to exceed ten days: Provided, That prior to February first of any year, any board of directors or controllers of any school district may authorize such enumeration to be made by the attendance officers or other persons, at the expense of the school district, under the same conditions as herein provided for assessors: Provided further, That the attendance officers, if there be any, or the superintendent of schools, or the secretary of the school board, shall have the power to add to this register the names of children within the prescribed ages whose names do not appear thereon.

Sec. 5. It shall be the duty of each teacher in the school district to report immediately to the attendance officer or the superintendent of schools, or the secretary of the board of directors or controllers, the names of all children, on the list previously funished by said superintendent or secretary, who have been absent three days or their equivalent without lawful excuse; when, if it shall appear that any parent, guardian or other person having control of any child or children shall have failed to comply with the provisions of this act, after notification in writing as provided in section two, the superintendent or secretary, or attendance officer if there be one, in the name of the school district, shall proceed against the offending party or parties in accordance with the provi-

sions of this act: Provided further, That if sufficient cause be shown for the neglect of the requirements of this act, or if the costs of prosecution cannot be collected from the defendant, said cost may be paid out of the district funds upon a proper voucher approved by the board of directors or controllers.

Sec. 6. The superintendent of schools or secretary, or attendance officer if there be one, of any board of directors or controllers who wilfully refuses or neglects to comply with the provisions of this act shall be guilty of a misdemeanor, and upon conviction thereof, before an alderman, magistrate or justice of the peace, shall forfeit a fine not exceeding twenty-five dollars.

Sec. 7. The State Superintendent of Public Instruction may withhold one-fourth State appropriation from any school district which neglects or refuses to enforce the provisions of this act in a manner and degree satisfactory to the State Superintendent of Public Instruction.

Sec. 8. The act of May sixteenth, one thousand eight hundred and ninety-five, entitled "An act to provide for the attendance of children in the schools of this Commonwealth, and making an enumeration of children for that purpose; also, providing compensation for the assessors making the enumeration, and providing penalties for violations of this act;" and the act of the twelfth of July, Anno Domini one thousand eight hundred and ninety-seven, entitled "An act to amend sections one, two, three, four and five of an act, entitled 'An act to provide for the attendance of children in the schools of this Commonwealth, and making an enumeration of children for that purpose; also providing compensation for the assessors making the enumeration, and providing penalties for the violation of this act,' approved the sixteenth day of May, Anno Domini one thousand eight hundred and ninety-five, increasing the age within which children shall be subject to its provisions to sixteen years, and making certain exemptions, subjecting principals and teachers to certain penalties, conferring upon the directors or controllers power to designate schools for those who fail to attend schools, to establish special schools for truants and other offenders, and providing for the restraint of truants and other offenders, for registration by the attendance officers and report of absentees from school," and any other acts or parts of acts, inconsistent herewith, be and are hereby repealed.

Approved—The 11th day of July, A. D. 1901.
WILLIAM A. STONE.

The foregoing is a true and correct copy of the act of the General Assembly No. 335.
W. W. GRIEST,
Secretary of the Commonwealth.

MILLION DOLLAR APPROPRIATION.

AN ACT making an appropriation for the support and maintenance of the common schools of this Commonwealth.

Section 1. Be it enacted, &c. That the sum of one million dollars be and the same is hereby specifically appropriated for the support and maintenance of the common schools of this Commonwealth, to be paid on warrants of the Superintendent of Public Instruction in favor of the several school districts of the Commonwealth, in four equal annual instalments of two hundred and fifty thousand dollars each. Each of said instalments shall be paid between the first day of June and the first day of August in each year, beginning with the year one thousand nine hundred and one, out of any money then in the treasury; and the amount to be paid to each school district shall be determined by the ratio fixed during the preceding fiscal year for the distribution of the ordinary appropriation for the support and maintenance of the common schools.

Approved—The 18th day of July, A. D. 1901.
WILLIAM A. STONE.

The foregoing is a true and correct copy of the Act of the General Assembly No. 417.
W. W. GRIEST,
Secretary of the Commonwealth.

SUPERVISING PRINCIPALS.

AN ACT to authorize the school directors of townships having a population of over four thousand inhabitants to employ one person, holding a permanent certificate or diploma issued by a State Normal School of this Commonwealth, as supervising principal of the schools of said township, at a salary to be fixed by said board.

Section 1. Be it enacted, &c., That the school directors of any township in this Commonwealth having a population of over four thousand inhabitants may, at the time of the annual election of teachers, elect viva voce, by a majority of the whole number of directors, one person, holding a permanent certificate or a diploma issued by a State Normal School of this Commonwealth, as supervising principal of public schools of said township, or may employ one of the teachers of such township, having said qualifications, to perform the duties of supervising principal, for a term not exceeding three years, at a salary to be fixed by the school board at the time such supervising principal shall be elected or employed.

Sec. 2. Such supervising principal, when elected, shall discharge such duties as the county superintendent of public schools and the board of directors by whom he was employed may require, and shall be removed from office in the same manner and for the same causes as teachers in the public school may be removed.

Approved—The 25th day of June, A. D. 1901.
WILLIAM A. STONE.

The foregoing is a true and correct copy of the act of the General Assembly No. 292.
W. W. GRIEST,
Secretary of the Commonwealth.

CENTRALIZATION OF TOWNSHIP SCHOOLS, ETC.

AN ACT to amend an act, entitled "An act to provide for the centralization of township schools, and to provide high schools for townships," approved April twenty-five, one thousand nine hundred and one.

Section 1. Be it enacted, &c., That section five of an act, entitled "An act to provide for the centralization of township schools, and to provide high schools for townships," which reads as follows:

"*Sec.* 5. In a township in which proceedings have been under the preceding sections of this act and the vote has been favorable for centralization, the board of school directors are

required to maintain and support a graded course of instruction, and may include a high school course of not less than two years; they are also required to furnish transportation to and from school to all pupils living more than three-fourths of a mile from the central building, said distance to be measured from the enclosure immediately surrounding their residence to the schoolhouse property, along the nearest public highway," be and the same is hereby amended to read as follows:

Sec. 5. In a township in which proceedings have been had under the preceding sections of this act and the vote has been favorable for centralization, the board of school directors are required to maintain and support a graded course of instruction, and may include a high school course of not less than two years; they are also required to furnish transportation to and from school to all pupils living more than three-fourths of a mile from the central building, said distance to be measured from the enclosure immediately surrounding their residence to the schoolhouse property, along the nearest public highway: *Provided, That no school shall be abolished or discontinued in any subdistrict where, on account of the geography of the district, it is impracticable for the pupils to be conveyed to the school established at the point of centralization.*

Approved—The 26th day of June, A. D. 1901.

WILLIAM A. STONE

The foregoing is a true and correct copy of the Act of the General Assembly No. 295.

W. W. GRIEST,
Secretary of the Commonwealth.

REAL ESTATE NEEDED FOR NORMAL SCHOOLS.

AN ACT authorizing the condemnation of real estate needed for the use of State Normal Schools.

Section 1. Be it enacted, &c., That whenever the board of trustees of any State normal school of this Commonwealth deem it necessary to enlarge the area of the real estate upon which the buildings of said normal school are erected, to meet the growing demands of said institution, including a campus, and cannot agree with the owner or owners of the land they wish to acquire, as to its purchase or occupancy, it shall be lawful for said board of trustees, on behalf of said normal school district, to enter upon and occupy sufficient ground for the purposes aforesaid, which they shall mark off, not exceeding two acres and to use and occupy the same, for the purposes for which they desire to use and occupy the same in connection with the said school; and for all damages done for the taking of the same, for the purposes as aforesaid, the trustees of such normal school district shall give bond, with security approved by the court of common pleas of the county in which such lands are situated, conditioned for the payment of such damages when the same shall be agreed upon by the parties or assessed according to law, which bond shall be filed in said court, for the use of the person interested.

Sec. 2. And it shall be lawful for the court of common pleas of the proper county in which said normal school is located, on application thereto by petition, either by said normal school district by its president or secretary, they being instructed by their board so to do, or by the owner or owners of said lands, in behalf of all to appoint a jury, consisting of three disinterested citizens of said county, and appoint a time, not less than thirty days thereafter, for said viewers to meet upon said land, of which time and place at least ten days' notice shall be given by petitioner to the said viewers and the other party; and the said viewers, or any two of them, having first been duly sworn or affirmed faithfully, justly and impartially to decide and a true report to make concerning all matters to be submitted to them in the premises, and having viewed said ground, they shall estimate and determine the quantity and value of said land so taken, to be used for the purposes aforesaid; and after having made a just and fair comparison of the advantages and disadvantages, they shall estimate and determine whether any, and, if any, what amount of damages has been or may be sustained, and to whom payable, and make report thereof to said court; and if damages be awarded, and the report be confirmed by the said court, judgment shall be entered therefor; and if the amount thereof be not paid within thirty days after the entry of said judgment, execution to enforce payment shall be had as in other similar cases: Provided, That either party shall have the right to have reviewers appointed by said court. Each viewer shall receive three dollars per day for each day necessarily employed in said view or review: And provided, also, That each party shall have the right to appeal from the report of said viewers or reviewers to the court of common pleas, within thirty days after the filing of such report, and the same shall be tried by a jury as in similar cases.

Sec. 3. The cost of the first view shall be paid by the party condemning the property; the cost of the review or appeal shall be paid by the party losing the controversy.

Approved—The 10th day of July, A. D. 1901.

WILLIAM A. STONE.

The foregoing is a true and correct copy of the act of the General Assembly No. 319.

W. W. GRIEST,
Secretary of the Commonwealth.

TOBACCO TO YOUNG PEOPLE.

AN ACT to prohibit the sale and furnishing of tobacco to persons under the age of sixteen years.

Section 1. Be it enacted, &c., That no person or persons shall sell tobacco, in any form, to any person under the age of sixteen years.

Sec. 2. That no person or persons shall, by purchase, gift or other means, furnish tobacco, in any form, to a person under the age of sixteen years.

Sec. 3. Any person violating the provisions of this act shall be guilty of a misdemeanor, and upon conviction shall be sentenced to pay a fine not exceeding one hundred dollars, or to undergo confinement in the county jail for a period not exceeding thirty days, or both, as the court may determine.

Sec. 4. All acts or parts of acts inconsistent herewith be and the same are hereby repealed.

Approved—The 10th day of July, A. D. 1901.

WILLIAM A. STONE.

The foregoing is a true and correct copy of the act of the General Assembly No. 323.

W. W. GRIEST,
Secretary of the Commonwealth.